

RCRA RECORDS CENTER
FACILITY MacDermid
I.D. NO. CTD 001164599
FILE LOC. R-1B
OTHER RDMS # 100859

DRAFT HAZARDOUS WASTE FACILITY PERMIT



RDMS DocID 00100859

Pursuant to Chapters 439 and 446k of the Connecticut General Statutes, a permit is issued to

Permittee: MacDermid, Incorporated
526 Huntingdon Avenue
Waterbury, CT 06708

Facility Identification
Number: CTD 001164599
Permit Number: DEP/HWM 151-028

to operate a hazardous waste storage facility located at 526 Huntingdon Avenue in Waterbury, CT, in accordance with Sections 22(a)-6 and 22a-449(c) of the Connecticut General Statutes as specified in the conditions and attachments set forth herein.

All terms used in the permit are as defined in Section 22a-449(c)-1 of Connecticut's Hazardous Waste Regulations or if not defined in Connecticut's Regulations as defined in 40 CFR Part 260 and 264.141 of the Federal Regulations.

This permit is based on the data found in the Part B permit application and revisions submitted to the Department of Environmental Protection dated November 8, 1988, March 12, 1990, and May 11, 1990, and on other information. The Permittee must keep records of all data used to complete the permit application and any supplemental information submitted for the effective term of this permit. Any inaccuracies found in this data could lead to the termination, revocation, and reissuance, or modification of this permit and/or civil or criminal enforcement action, depending on the nature of the inaccuracy.

This permit may be modified, or alternatively revoked and reissued, as provided for in 40 CFR 270.41, to comply with any applicable standards issued or approved under Section 22a-449(c) of the Connecticut General Statutes if standards so issued or approved:

1. Contain different conditions or are otherwise more stringent than the permit; or
2. Control any material not controlled in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Statutes then applicable.

date

Commissioner
Environmental Protection

This permit shall become effective on _____ and shall expire on _____.

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SECTION I

HAZARDOUS WASTE PERMIT
STANDARD CONDITIONS

A. DESIGN AND OPERATION OF FACILITY

The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

B. EFFECT OF PERMIT

- (1) Compliance with this permit during its term constitutes compliance, for purposes of enforcement, with Section 22a-449(c) of the Connecticut General Statutes. However, a Permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in Section 22a-449(c)-16.
- (2) The issuance of this permit does not authorize any injury to persons for property or invasion of other private rights, or any infringement of State or local law or regulations.

C. SEVERABILITY

The provisions of this permit are severable, and if any provisions of this permit, or the application of any provisions of this permit to any circumstances is held valid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

D. CONFIDENTIAL INFORMATION

The Permittee may claim confidential any information required to be submitted by this permit in accordance with Section 1-19 of the Connecticut General Statutes.

E. DUTIES AND REQUIREMENTS

- (1) Duty to comply. The Permittee shall comply with all conditions of this permit except that the Permittee need not comply with the conditions of this permit to the extent and for the duration such non-compliance is authorized in an emergency permit. Any permit non-compliance, except under the terms of an emergency permit, constitutes a violation of the appropriate Act and is grounds for enforcement action; for permit termination, revocation and reissuance or modification; or for denial of a permit renewal application.
- (2) Duty to reapply. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee shall apply for and obtain a new permit.
- (3) Need to halt or reduce activity not a defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) Duty to mitigate. In the event of noncompliance with the permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent its noncompliance from having significant adverse impacts on human health of the environment.
- (5) Proper operation and maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training; and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (6) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated non-compliance, does not stay any permit condition.
- (7) Property rights. The permit does not convey any property rights of any sort, or any exclusive privilege to the Permittee.

- (8) Duty to provide information. The Permittee shall furnish to the Commissioner, within a reasonable time, any relevant information which the Commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this permit.
- (9) Inspection and entry. The Permittee shall allow the Commissioner, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:
- (a) Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - (b) Have access to and copy at reasonable times, any records that shall be kept under the conditions of this permit;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
 - (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by Statute, any substances or parameters at any location.
- (10) Monitoring and records.
- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261. Laboratory methods must be those from Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846 as referenced in 40 CFR Part 260.11.
 - (b) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Commissioner at any time. The Permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the active life of the facility, and for disposal facilities for the post-closure care period as well.

(c) Records for monitoring information shall include:

- (1) The date, exact place and time of sampling or measurements;
- (2) The individual(s) who performed the sampling or measurements;
- (3) The date(s) analyses were performed;
- (4) The individual(s) who performed the analyses;
- (5) The analytical techniques or methods used; and
- (6) The results of such analyses.

(11) Signatory requirements. All applications, reports, or information submitted to the Commissioner shall be signed and certified as required by 40 CFR 270.11.

(12) Reporting requirements.

- (a) Planned changes. The Permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility.
- (b) Anticipated non-compliance. The Permittee shall give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in non-compliance with permit requirements.
- (c) Certification of construction. For a new facility, the Permittee may not treat, store or dispose of hazardous waste; and for a facility being modified the Permittee may not treat, store or dispose of hazardous waste in the modified portion of the facility, until:
 - (1) The Permittee has submitted to the Commissioner by certified mail or hand delivery a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
 - (2) A. The Commissioner has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

B. More than 15 days have elapsed since the date of submission of the letter in paragraph (1) above, and the Permittee has not received notice from the Commissioner of his intent to inspect.

- (d) Transfers. This permit is not transferable to any person except after notice to the Commissioner. The Commissioner may require modification or revocation and reissuance of the permits to change the name of the Permittee and incorporate such other requirements as may be necessary under Section 22a-449(c)-16 and 40 CFR 270.40.
- (e) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
- (f) Compliance schedules. Reports of compliance and non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- (g) Twenty-four hour reporting:
 - 1. The Permittee shall report any non-compliance which may endanger health or the environment orally within 24 hours from the time the Permittee becomes aware of the circumstances, including:
 - A. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
 - B. Any information of a release or discharge of hazardous waste or of a fire or explosion at the hazardous waste management facility, which could threaten the environment or human health outside the facility.
 - 2. The description of the occurrence and its cause shall include:
 - A. Name, address, and telephone number of the owner or operator;
 - B. Name, address, and telephone number of the facility;
 - C. Date, time and type of incident;
 - D. Name and quantity of material(s) involved;

- E. The extent of injuries, if any;
 - F. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - G. Estimated quantity and disposition of recovered material that resulted from the incident.
3. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the non-compliance and its cause; the period of non-compliance including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. The Commissioner may waive the five day written notice requirement in favor of a written report within fifteen days.
- (h) Manifest discrepancy report. If a significant discrepancy in a manifest is discovered, the Permittee shall attempt to reconcile the discrepancy. If not resolved within fifteen days, the Permittee shall submit a letter report, including a copy of the manifest, to the Commissioner as required by Section 22a-449(c)-5(e) of Connecticut Hazardous Waste Management Regulations.
 - (i) Unmanifested waste report. This report shall be submitted to the Commissioner within 15 days of receipt of unmanifested waste as required by Section 22a-449(c)-27(e) of the Connecticut Hazardous Waste Management Regulations.
 - (j) Annual report. An annual report shall be submitted covering facility activities during the previous calendar year as required by Section 22a-449(c)-27(d) of Connecticut Hazardous Waste Management Regulations.
 - (k) Other non-compliance. The Permittee shall report all instances of non-compliance not reported under paragraphs (12) (e), (f) and (g) of this Section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(g) of this Section.

- (l) Other Information. When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Commissioner, it shall promptly submit such facts or information.
- (m) For the purpose of compliance with this permit, computation of time periods shall be made by the methodology specified in 40 CFR Part 124.20.
- (n) Where this permit requires the submission of written reports or notification to the Commissioner, the report or notification shall be deemed submitted on the post-marked date.
- (o) Waste Minimization. Within thirty (30) days of the issuance of this permit and at least annually thereafter, the Permittee shall include a certification of the following in the written operating record kept at the facility:
 - a) That as a generator of hazardous waste, the Permittee is implementing a program to reduce the volume and toxicity of such hazardous waste to the degree which is economically practicable; and
 - b) That the method the Permittee uses to treat, store or dispose of its hazardous waste is that practicable method which minimizes the present and future threat to human health and the environment.

SECTION II

HAZARDOUS WASTE PERMIT
SPECIFIC FACILITY CONDITIONS

A. Container Storage

1. Except as allowed by 262.34 and Section 22a-449(c)-6 through -9 of the Regulations of the Connecticut State Agencies, the storage of hazardous wastes in containers shall be limited to the following locations, as indicated on Figure SFC-1:
 - (1) the main container storage area;
 - (2) the QC area (waste staging area);
 - (3) the combustible storage area;
 - (4) the flammable material storage area; and,
 - (5) the metal hydroxide/sulfide sludge storage area.
2. The Permittee shall maintain and operate the above indicated storage areas as shown in Figures SFC-1, SFC-2, SFC-3, SFC-4, SFC-5, SFC-6, and SFC-7.
3. Permitted Capacity:
 - a.) The total storage volume for each hazardous waste container storage area shall not exceed the values indicated in Table SFC-1. This capacity shall be based on the rated capacity of each container (i.e. partially full containers will be assumed to be full for the purposes of calculating the total volume in storage).
 - b.) Only the container types indicated in Table SFC-1 shall be stored in each hazardous waste container storage area.
 - c.) No hazardous waste container storage area shall ever exceed the maximum number of each container type indicated in Table SFC-1.
4. Permitted Waste Types and Storage Locations:

Each hazardous waste container storage area shall be utilized to store only the hazardous waste streams identified in Table SFC-2.

OUTDOOR RAW MATERIAL STORAGE TANKS

- 1 CARBON DIOXIDE (PRESSURE TANK)
- 2 HYDROCHLORIC ACID
- 3 HYDROCHLORIC ACID
- 4 NITRIC ACID
- 5 SULFURIC ACID
- 6 HYDROGEN PEROXIDE
- 7 ANHYDROUS AMMONIA (PRESSURE TANK)
- 8 SODIUM CARBONATE (DRY)
- 9 SODIUM METASILICATE (DRY)
- 10 SODIUM HYDROXIDE (DRY)
- 11 SODIUM CARBONATE (DRY)

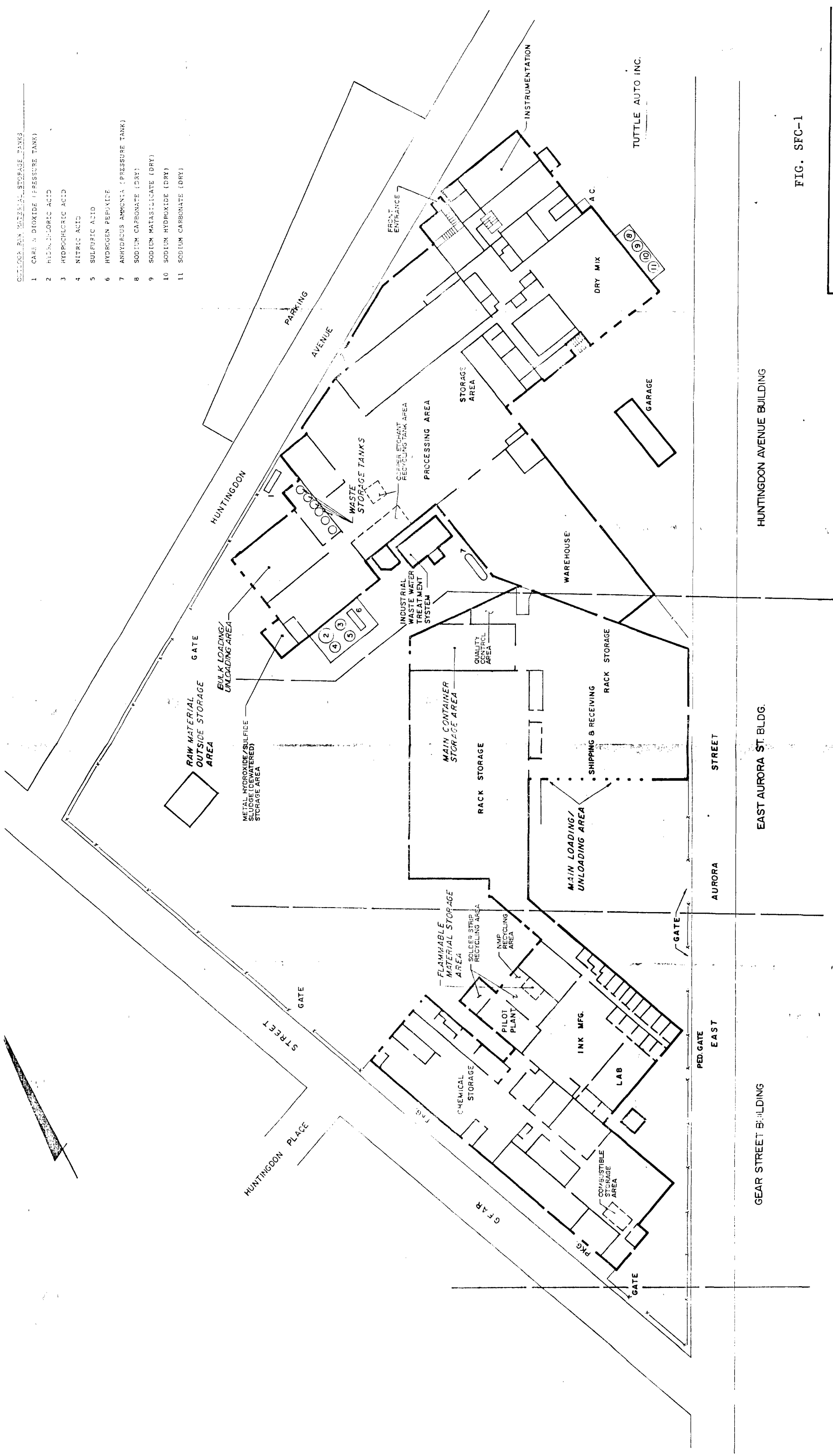


FIG. SFC-1

PART B PERMIT APPLICATION			
FACILITY LAYOUT MacDERMID, INC. 526 HUNTINGDON, AVE. WATERBURY, CT.			
hrp associates, inc. engineering & geology post office box 132 10 leaington street new Britain, CT 06051 860-3827-0004	RDM	MCP	
	MLP	FEB, 1990	
	RDM	MAC 0001 RC	

ORIGINAL OCT 1989
REVISED FEB 1990

TABLE SFC-1

HAZARDOUS WASTE STORAGE AREAS:

PERMITTED STORAGE CAPACITIES AND CONTAINER TYPES

<u>Hazardous Waste Storage Area</u>	<u>Container Type</u>	<u>Max. # of Container</u>	<u>Total Storage Area Capacity</u>
Main Container Storage Area	55-gal. drums	1400	77,000 gallons
	330-gal. storage totes	20	
QC Area (Waste Staging Area)	55-gal. drums	---	---
	330-gal. storage totes	---	
Combustible Storage Area	55-gal. drums	54	4,290 gallons
	330-gal. storage totes	4	
Flammable Material Storage Area	55-gal. drums	16	880 gallons
Metal Hydroxide/ Sulfide Sludge Area	22 yd ³ rolloff dumpster	1	22 yd ³
Bulk Tank Storage Area*	N.A.	N.A.	29,000 gallons

*See Table SFC-3 in Section II.B. for a breakdown of the capacities of the Bulk Tank Storage Area.

Still waiting for
finalized QC Area
Storage volumes



TABLE SFC-2

PERMITTED WASTE STORAGE LOCATIONS

<u>Hazardous Waste Storage Area</u>	<u>Permitted Waste Streams</u>	<u>EPA Waste Code #</u>
Main Container Storage Area and QC Area (Waste Staging Area)	Copper Etchant	D002/D008
	Solder Conditioner	D002
	Solder Stripper	D002/D008
	Acid Zinc Soln.	D002
	Acid Copper Soln.	D002
	Palladium Soln.	D002
	Waste Nickel Soln.	D002
	Lead Fluoride Sludge	D008
Combustible Storage Area	Vacuum Pump Oil/Inks	D001
	Waste Mixed Solvents, Non-Chlorinated	D001/F003/F005
	Waste Mixed Solvents, Chlorinated	D001/F002
Flammable Material Storage Area	Waste Mixed Solvents, Non-Chlorinated	D001/F003/F005
	Waste Mixed Solvents, Chlorinated	D001/F002
	Acetone	U002
	Methanol	U154
Metal Hydroxide/ Sulfide Sludge Storage Area	Metal Hydroxide/Sulfide Sludge	F006
Bulk Tank Storage Area	Copper Etchant	D002/D008

Waste Codes for
Solvents may change

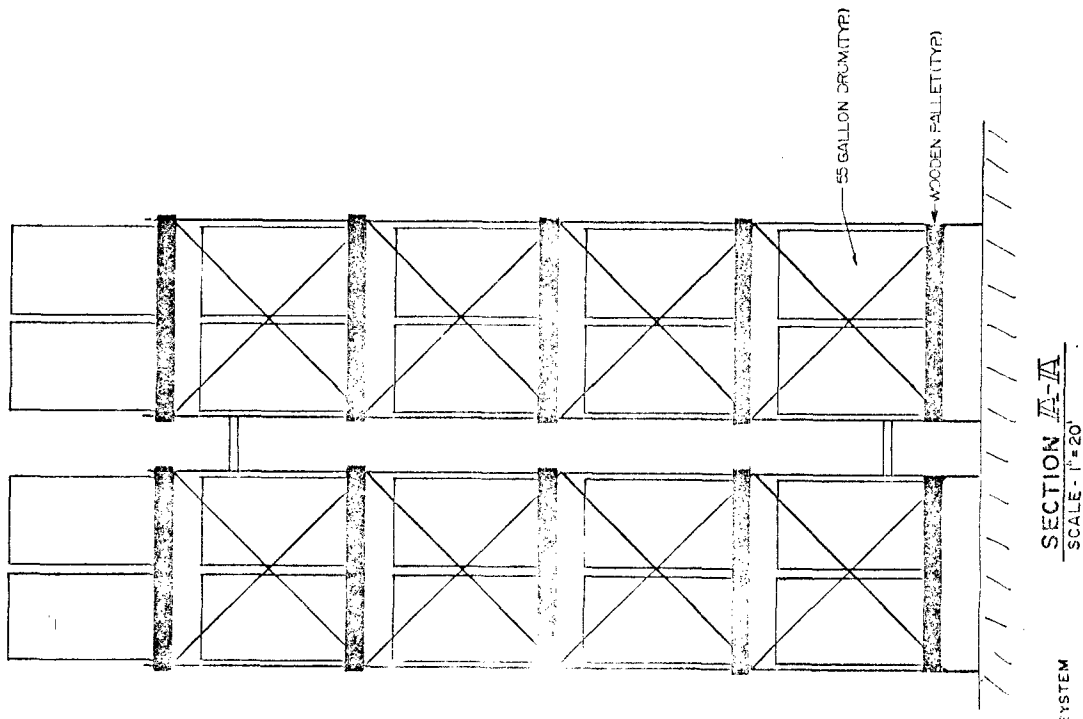
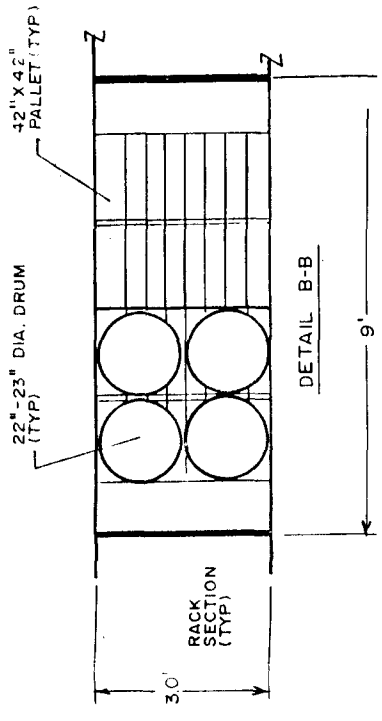
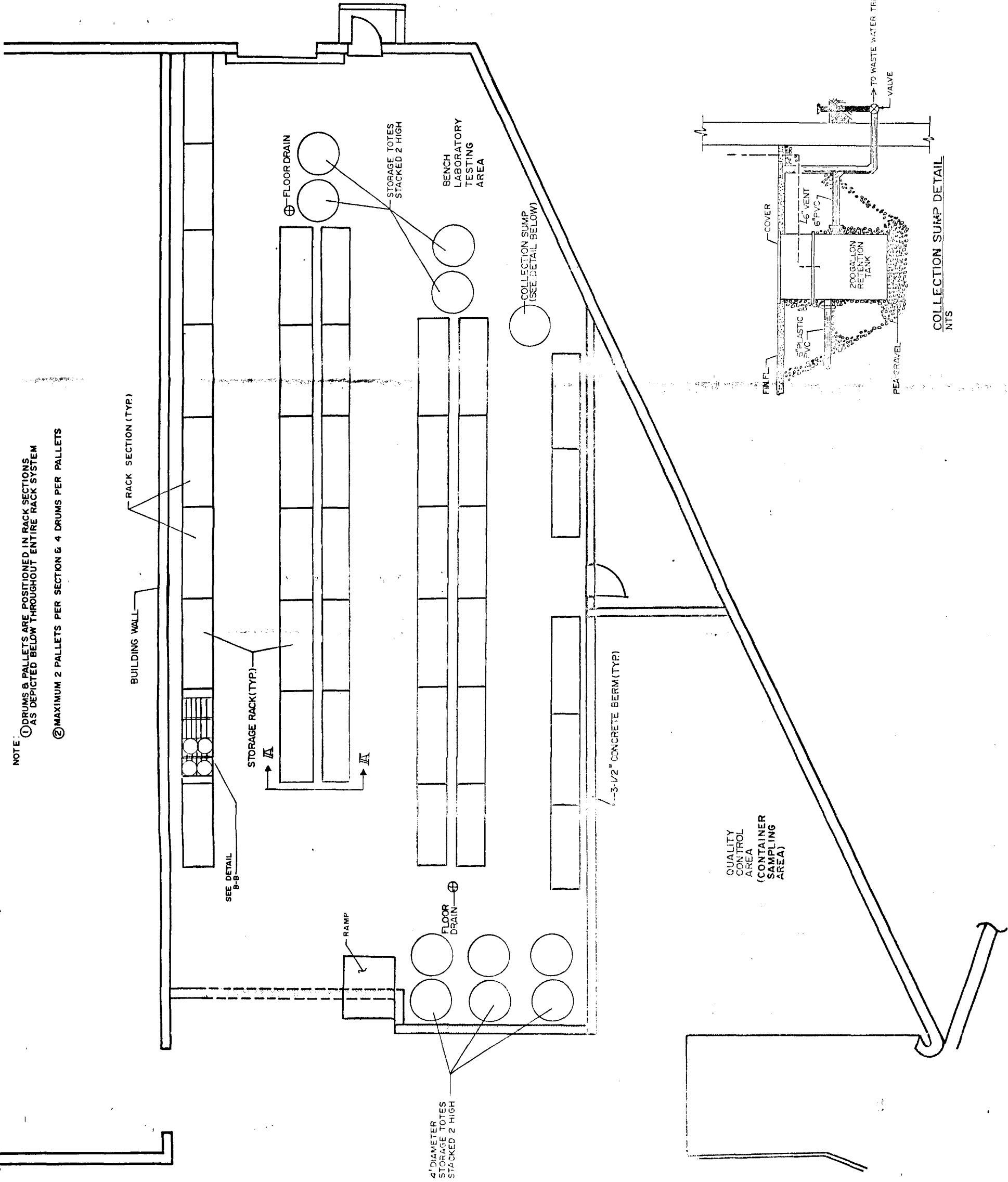
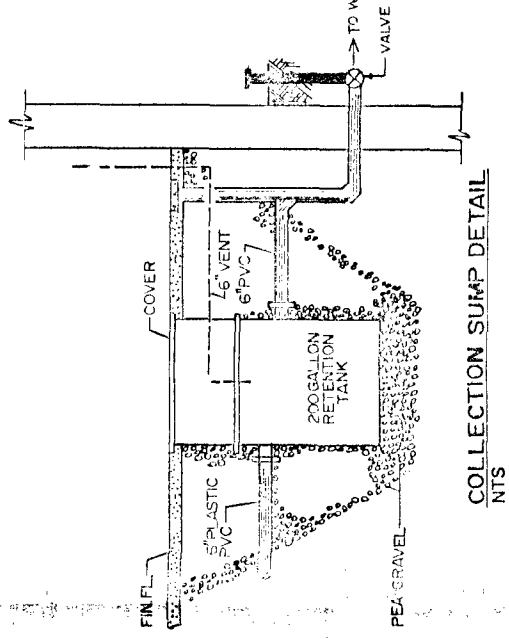


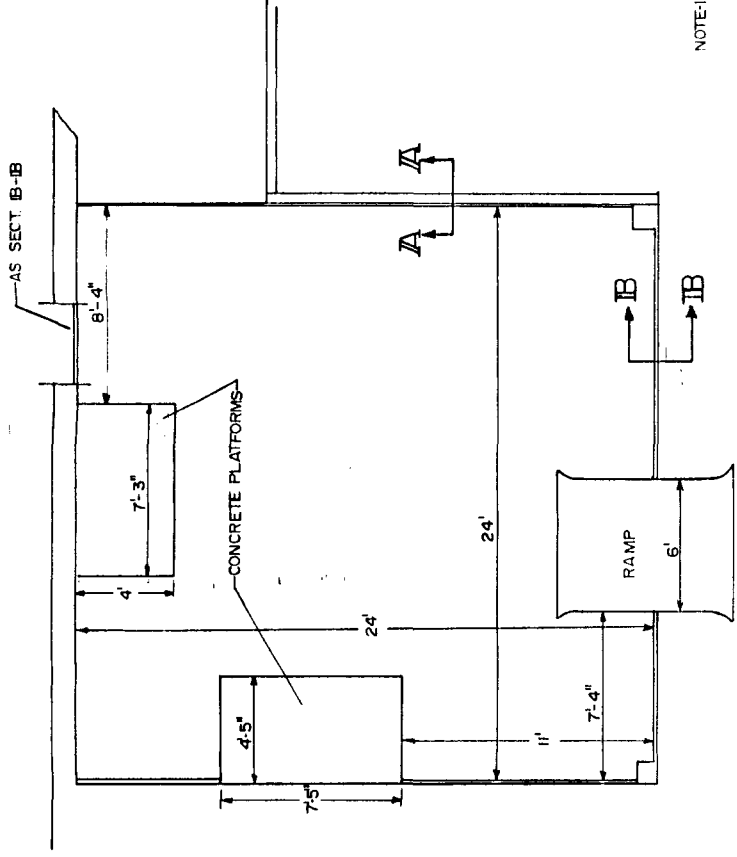
FIG. SFC-2

PART B PERMIT APPLICATION			
MAIN CONTAINER STORAGE AREA			
MACDERMID, INC. 526 HUNTINGDON AVE. WATERBURY, CT.			
hrp associates, inc. engineering & geology post office box 732 10 Huntington Street Waterbury, CT 06650 (203) 827-2024	RDM	RDM	RDM
	BOB	BOB	FEB, 1990
	RDM	MAC	0001/RC

33+40 1550 000000

ORIGINAL: OCT, 1988
1st REVISION: FEB, 1990
2nd REVISION: MAY, 1990

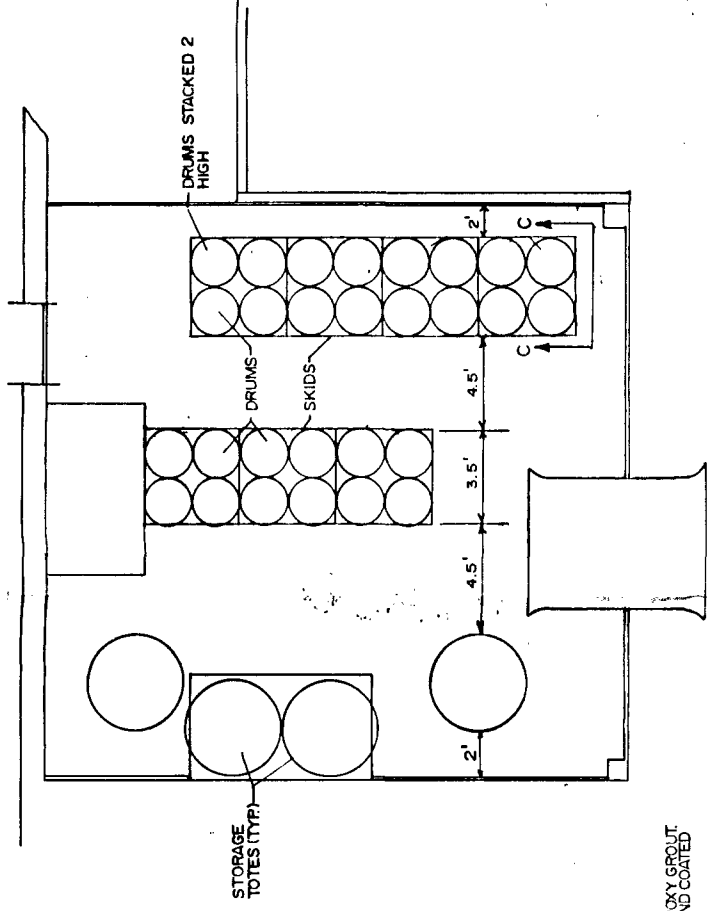




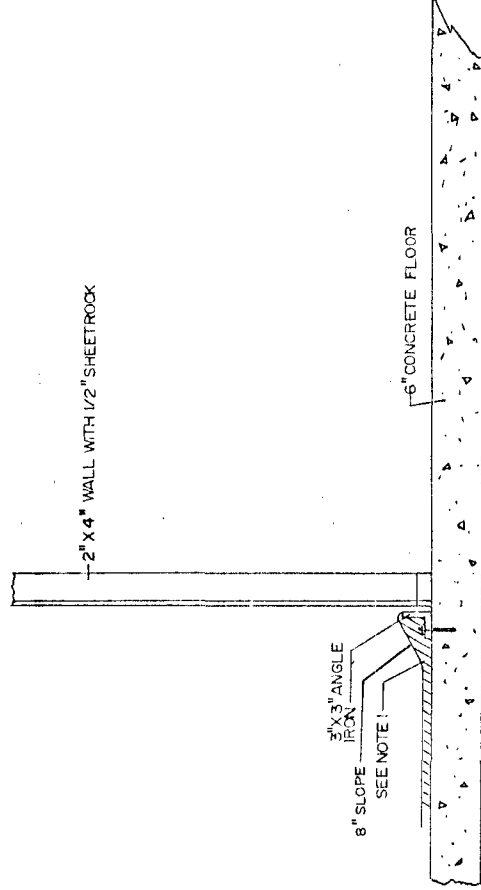
GENERAL LAYOUT

NOTE-1 BERM COVERED W/STONEHARD EPOXY GROUT COATED W/4" EPOXY OVERLAY AND COATED W/APPROX. 10" SEALER

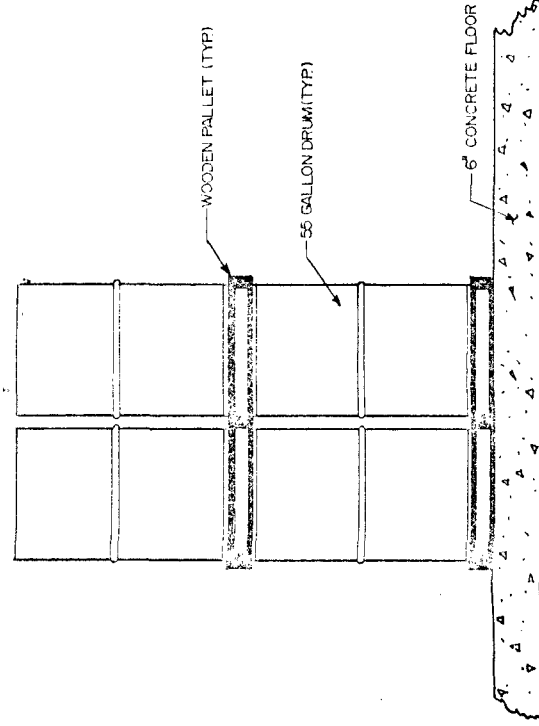
NOTE-2 THIS AREA IS A SATELLITE STORAGE AREA FOR FLAMMABLE WASTES



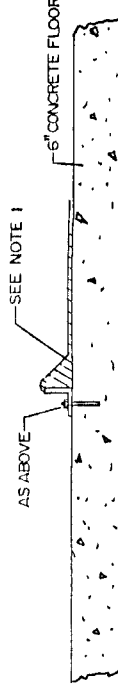
STORAGE LAYOUT



SECTION A-A



SECTION C-C



SECTION B-B

FIG. SFC-3

PART B PERMIT APPLICATION

COMBUSTIBLE STORAGE AREA

MACDERMID, INC.

526 HUNTINGDON AVE.

WATERBURY, CT

hdp associates inc.	RDM	MCP
engineering & geology	BOB	OCT, 1988
post office box 732	RDM	PB-MAN-0
10 leslie street		
new brunswick 06030		
(203) 827-0004		

REVISED MARCH, 1990

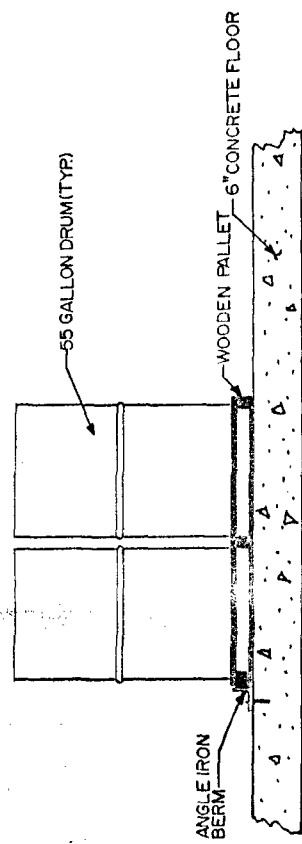
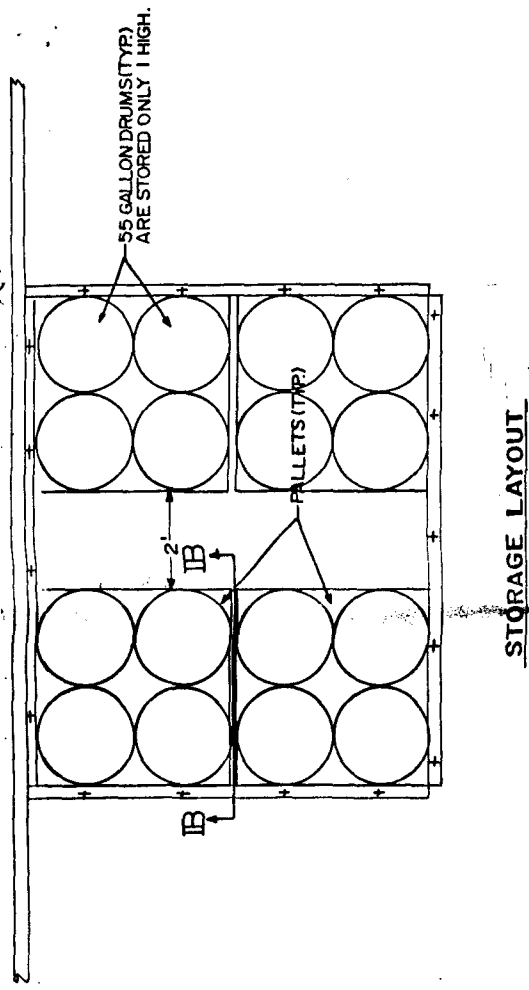
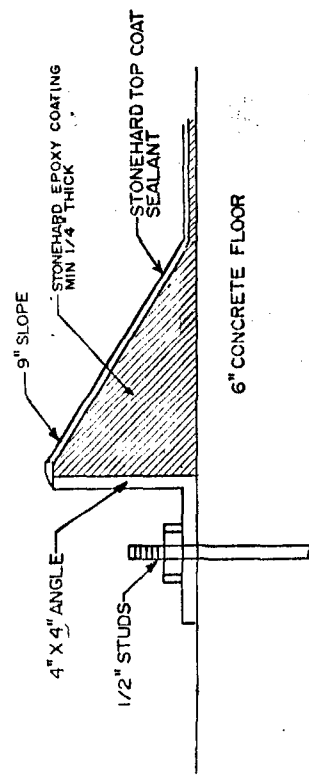
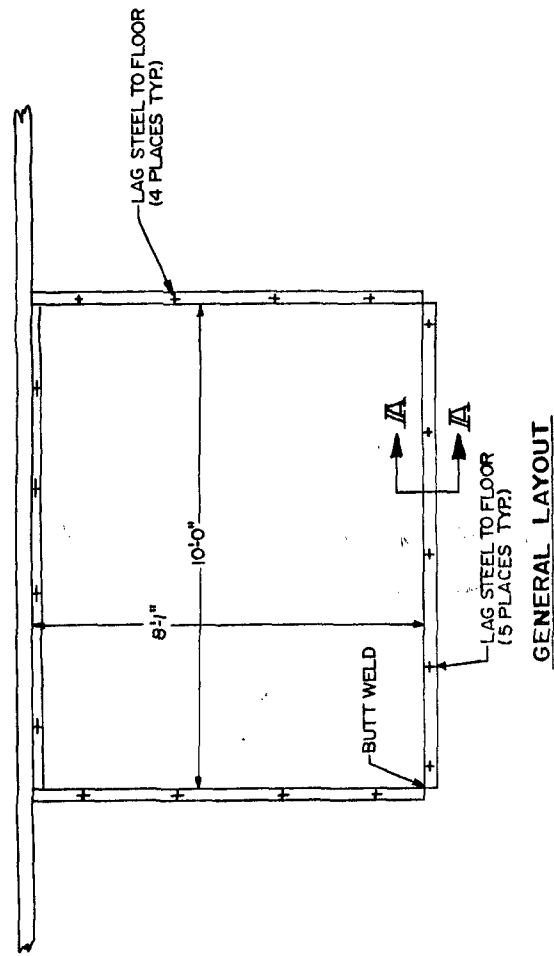


FIG. SFC-4

PART B PERMIT APPLICATION			
FLAMMABLE MATERIAL STORAGE AREA			
MACDERMID, INC.			
526 HUNTINGDON AVE.			
WATERBURY, CT.			
hir Associates, Inc.	RDM	MCP	
Engineering & Geology	BOB	OCT, 1988	
100 Main Street	RDM	MAC-0001 RC	
Waterbury, CT 06705			

REVISION: MARCH, 1990

Figure SFC-7
is not yet complete

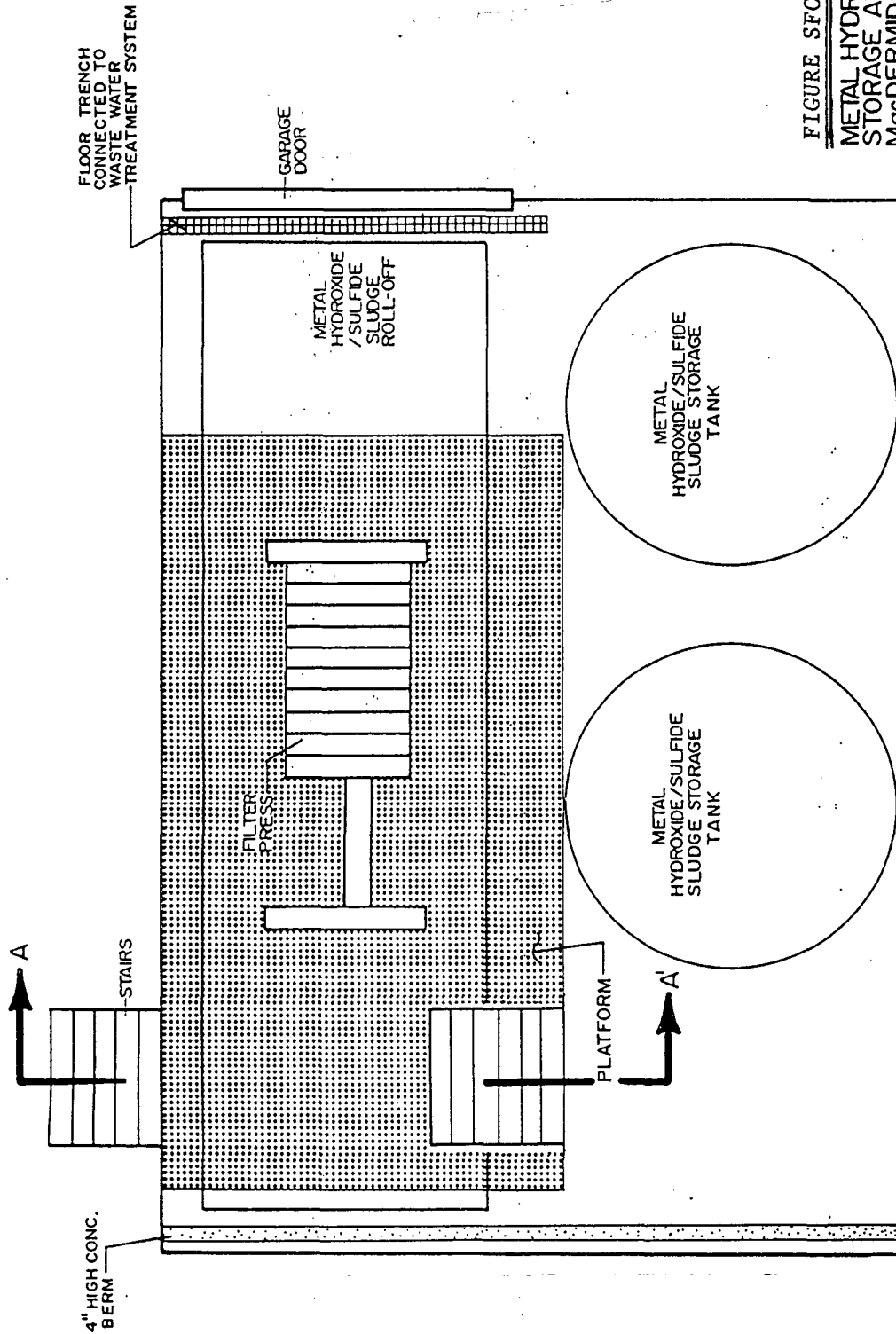
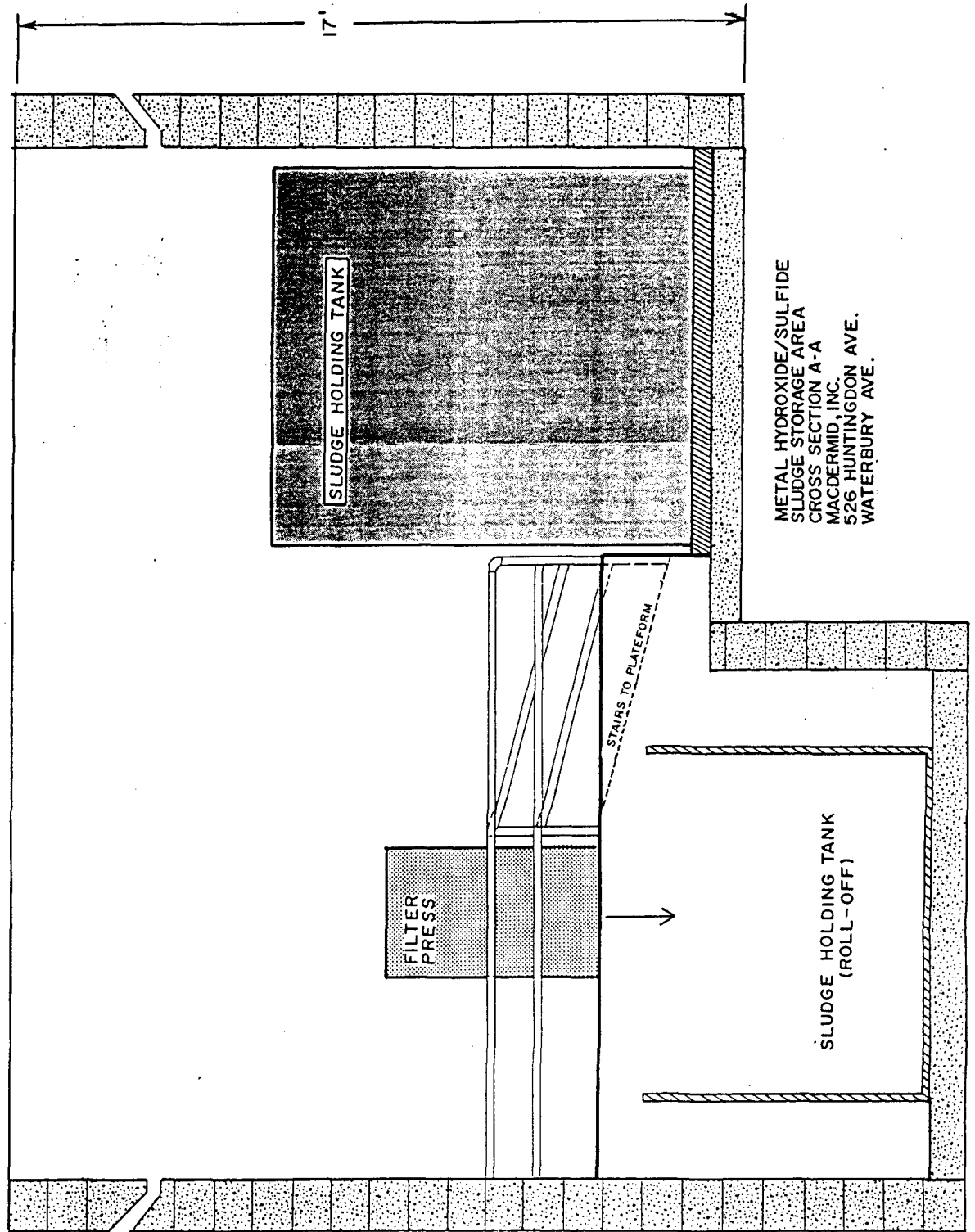


FIGURE SFC-5

METAL HYDROXIDE/SULFIDE SLUDGE
STORAGE AREA
MacDERMID, INC.
526 HUNTINGDON AVE.
WATERBURY, CT.

FIGURE SFC-6




5. The initial receipt, off-loading, loading, and off-site shipment of containers of hazardous waste shall be limited to the following locations (as indicated in Figure SFC-1):
 - a.) the main loading/unloading area adjacent to the East Aurora Street warehouse, and
 - b.) the metal hydroxide/sulfide sludge storage area.
6. Hazardous wastes shall not be:
 - i. received from off-site, or
 - ii. stored for greater than 90 days,in any area except those identified in comment II.A.1 or II.A.5 above.
7. The Permittee shall not allow containers of hazardous waste to remain in the main loading and unloading area, shipping and receiving dock, or any other unpermitted area for longer than is necessary to properly unload the containers from over-the-road vehicles, and transfer them to the appropriate storage area(s).
8. Under no circumstances may hazardous wastes be stored in the QC area (waste staging area) for longer than 72 hours. Documentation shall be available for each container of waste which will confirm that the container has not exceeded this time limit. In addition, hazardous wastes shall not be retained in this area after the required analytical work has been completed.
9. The Permittee shall maintain the areas indicated in Condition II.A.1. and II.A.5. above so as to prevent run-on and accumulation of precipitation in the areas, and so as to prevent spills and leakages in the areas from reaching and contaminating on-site soils or groundwater.
10. The Permittee shall maintain and repair the concrete surfaces near the container loading/unloading area truck dock, the bulk loading/unloading area, the metal hydroxide/sulfide storage area, and the on-site approaches to these areas to withstand the mechanical stresses of truck traffic to which they are subjected. These surfaces must be maintained in sufficient condition to prevent spillages of waste and damage to waste containers during transport on-site.

11. The transfer of containers of hazardous waste within the facility shall not be performed on bare soil or other unprotected surfaces. The transfer of such containers shall be accomplished using only fork lifts, barrel grabbers, and hand trucks; the transfer of containers shall be performed only by personnel experienced and trained in the use of these items of equipment.
12. Containers of hazardous wastes shall not be accepted at the facility unless appropriately trained and duly designated personnel are present at the facility to ensure that the waste is properly inspected, manifested, transferred, processed, tested (if applicable), and stored.
13. The Permittee shall maintain and repair the rack system in the main container storage area so as to ensure that it is capable of supporting the theoretical maximum mass loading that it could be subjected to, taking into consideration the permitted capacity of this area, and the densities of the wastes stored. If any portion of the rack system should become damaged due to excessive wear, corrosion, physical damage, or structural failure, the Permittee shall remove all wastes from that portion of the rack system and suspend use of that portion until repairs are completed. Repairs shall be considered adequate if they at least restore the damaged portion of the rack to its original strength and load-bearing capacity. If such repairs require the installation of a new rack system, the new system shall either:
 - a.) correspond to the original manufacturer's specification for the current rack system, or
 - b.) be of equivalent load-bearing capacity.If option b. above is chosen, the Permittee shall submit to DEP manufacturer's specifications and/or engineering calculations which demonstrate that the new system is capable of supporting the maximum theoretical loading that it could be subjected to.
14. The Permittee shall maintain the valve of the collection sump in the main container storage area in the closed position. This valve shall only be opened in the event that accumulated liquids in the sump have been tested in accordance with the facility waste analysis plan (Attachment A), the accumulated liquids have been determined to be compatible with the facility wastewater treatment system, and the treatment is in compliance with the facility wastewater discharge permit.

15. The QC Area (Waste Staging Area) shall be managed in accordance with the following restrictions:

a.)

*There may be
a couple more pint
conditions here*



16. The storage of containers in the combustible storage area shall be restricted by the following conditions:
- a.) only 55-gallon drums of hazardous waste may be stacked on top of one another in this area;
 - b.) 330-gallon transporters shall not be stacked on top of one another; and
 - c.) 55-gallon drums shall be stacked no greater than two (2) tiers high.
17. Containers of ignitable materials may not be stacked greater than one tier high in any hazardous waste storage area.
18. The Permittee shall maintain the combustible storage area and flammable material storage area to be in compliance with all applicable provisions of NFPA (National Fire Protection Association) Code 30, "Flammable and Combustible Liquids Code." Areas of concern include, but are not limited to, appropriately rated fire walls and fire doors, sprinkler systems, pile sizes and pile heights. The Permittee shall maintain and periodically update this documentation to support these two storage areas' continuing compliance with the Code.
19. The Permittee shall make allowances for the grounding of any drums of ignitable materials stored in the flammable material storage area and combustible storage area, at least during addition of waste to the drums.

20. The Permittee shall maintain aisle space to allow for unobstructed movement of personnel, drum handling equipment, fire protection equipment, and spill control equipment to all portions of each waste storage area. Aisle space between adjacent rows of containers shall be no less than 24 inches. Each individual container in each hazardous waste container storage area shall be sufficiently accessible to allow for label examination and scheduled container inspections.
21. If a container holding hazardous waste is not in good condition (e.g. severe rusting, has apparent structural defects, etc.), or if it begins to leak, the Permittee shall transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with this permit and the requirements of 40 CFR Part 264.
22. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
23. A container holding hazardous waste must not be opened, handled or stored in a manner which may rupture the container or cause it to leak.
24. The Permittee shall not place incompatible hazardous wastes, or incompatible hazardous wastes and other materials in the same container.
25. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material.
26. The Permittee shall separate or protect using a dike, berm, wall, or other device, any storage container holding a hazardous waste from any incompatible waste or other materials stored nearby in other containers, piles, or open tanks.
27. The Permittee shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired. Only 55-gallon drums or other containers which have been approved by the U.S. Department of Transportation (DOT), as indicated in 49 CFR Parts 172 and 173, may be used to contain hazardous wastes.

28. The Permittee shall maintain the berm, base, and any other secondary containment surfaces of all hazardous waste container storage areas such that they are free of cracks or gaps and sufficiently impervious to contain leaks, spills, or other accumulated liquids until any such materials are detected and removed. The berm and base of each storage area must be coated with Stonhard Stonclad HT epoxy coating or a similar coating of equivalent chemical resistance to the wastes stored in that area. The coating must be re-applied as soon as possible, but no later than thirty (30) days of discovering that the integrity of the coating has been impaired due to wear, cracks, blistering, or other causes. Hazardous waste must not be stored in any waste storage area in which the integrity of the coating or containment area is impaired.
29. The Permittee shall maintain the surface and slope of each hazardous waste container storage area as shown in Figures SFC-2 through SFC-7 and as described herein so as to drain and remove liquids resulting from leaks, spills, or precipitation, and to provide adequate containment capacity.
30. Spilled or leaked waste or any other accumulated liquids shall be removed from the containment surfaces of the hazardous waste container storage areas within twenty four hours of discovery or immediately if the containment capacity required by Permit Condition II.A.32 would not be provided. Accumulated waste shall be removed and placed into appropriate, DOT-approved containers.
31. Liquids removed from the containment surfaces of the hazardous waste storage areas or their collection sumps shall be managed as hazardous wastes unless it can be demonstrated that the materials are not hazardous wastes pursuant to 40 CFR Part 261. The presence of any listed hazardous waste (as found in 40 CFR Part 261, Subpart D) above detection limits (using appropriate methods in EPA Publication SW-846) shall cause any collected material to be a hazardous waste.
32. The Permittee shall maintain and operate the containment system in each hazardous waste container storage area to ensure sufficient capacity to contain 10% of the volume of all containers plus the volume of the largest container.
33. The Permittee shall have conducted the compatibility screening described in Section 6 of the waste analysis plan (herein included as Attachment A) prior to placing a hazardous waste or other material into a container storage area containing hazardous wastes or other materials.

34. Prior to placing containers of hazardous waste into storage, the containers shall be visually inspected to ensure that:
- a.) The number and identity of containers matches the number and identity indicated on the manifest;
 - b.) The wastes are in appropriate containers;
 - c.) The waste containers are properly labeled;
 - d.) The waste containers are not damaged or leaking;
 - e.) The waste containers are tightly closed;
 - f) The waste containers are accompanied by the appropriate paperwork, including manifests, analytical data as required by the facility Waste Analysis Plan (Attachment A), or other materials that may be required by regulation or by this permit.

Any damaged or leaking containers shall be overpacked in DOT-approved overpack containers, or emptied and the wastes transferred into new or reconditioned drums which are DOT-approved. No containers of hazardous waste which do not meet requirements 34.a. through 34.f. above may be received or shipped off-site by the Permittee.

35. The Permittee shall inspect the hazardous waste container storage areas in accordance with the inspection schedule incorporated herein as Attachment E.
36. The permittee shall close the hazardous waste container storage areas in accordance with the facility closure plan, incorporated herein as Attachment C, and as modified herein.
37. In calculating the required secondary containment capacity, in determining compatibility and allowed storage capacities, and with regard to all other restrictions on the hazardous waste container storage areas, the Permittee shall consider and include any virgin chemical products, manufactured chemical products, non-hazardous wastes, or other materials which might be present in the waste storage areas.
38. Except as provided in 40 CFR 268.50(d) and (e), the storage of hazardous wastes restricted from land disposal shall be subject to the following restrictions:

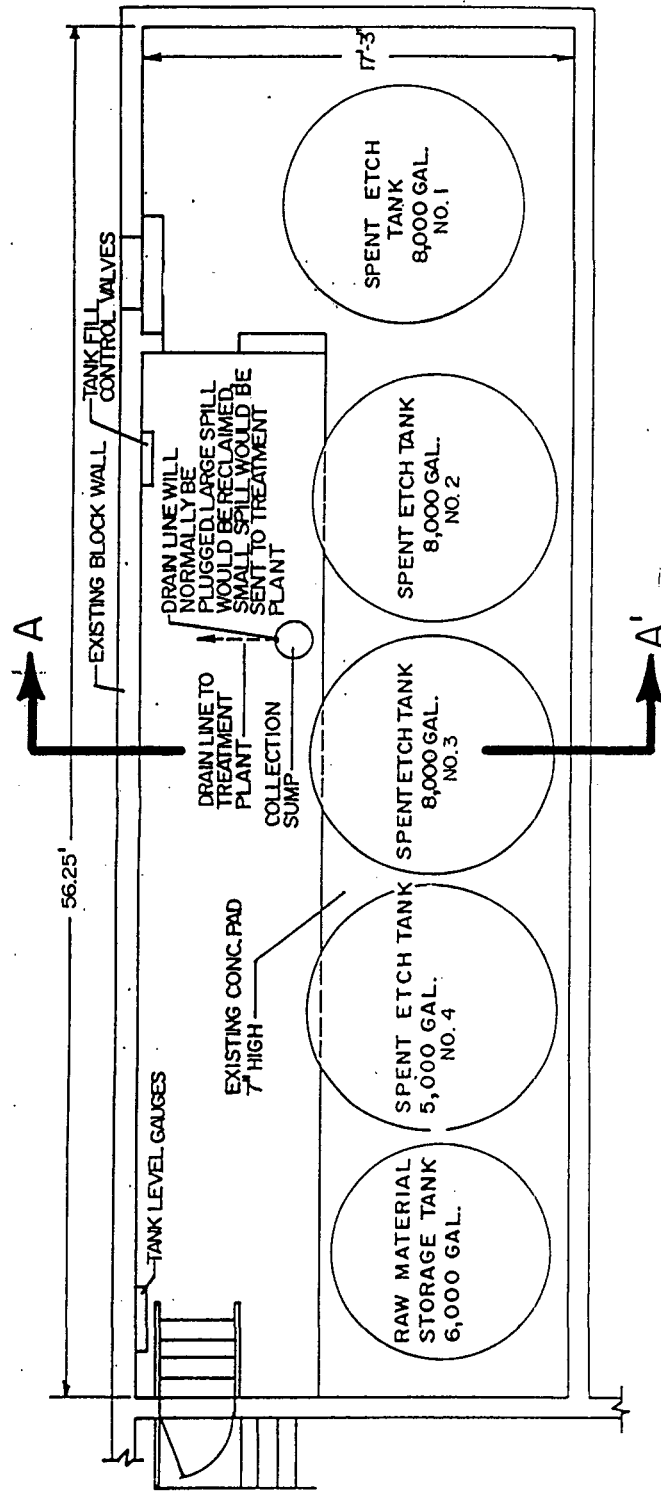
- a.) the Permittee may store land-banned hazardous wastes solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal;
 - b.) each container of land-banned hazardous waste shall be clearly marked to identify its contents and the date of initial accumulation; and,
 - c.) each tank of land-banned hazardous waste shall be clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank shall be recorded and maintained in the operating record at the facility.
39. With the exception of the metal hydroxide/sulfide sludge, the wastes in all hazardous waste container storage and processing areas shall be kept from freezing at all times. If heating equipment will be required at any time to achieve compliance with this condition in the combustible storage area or flammable material storage area, such equipment shall be listed or approved for use in explosive atmospheres by Underwriters Laboratory, Inc., Factory Mutual, or some other nationally recognized testing laboratory.

B. Tank Storage

1. Except as allowed by 262.34 and Section 22a-449(c)-6 through -9 of the Regulations of the Connecticut State Agencies, the receipt, storage, loading, and unloading of bulk hazardous wastes shall be limited to the bulk loading/unloading area and the bulk tank storage area (as indicated on Figure SFC-1).
2. The Permittee shall maintain and operate the bulk loading/unloading area and bulk tank storage area as shown in Figures SFC-8, SFC-9, and SFC-10, and Table SFC-3.
3. Permitted Capacity:
 - a.) The total storage volume in the bulk tank storage area shall not exceed the value indicated in Tables SFC-2.
 - b.) The volume of waste stored in any one tank shall not exceed the capacities indicated in Table SFC-3.
4. Permitted Waste Types:

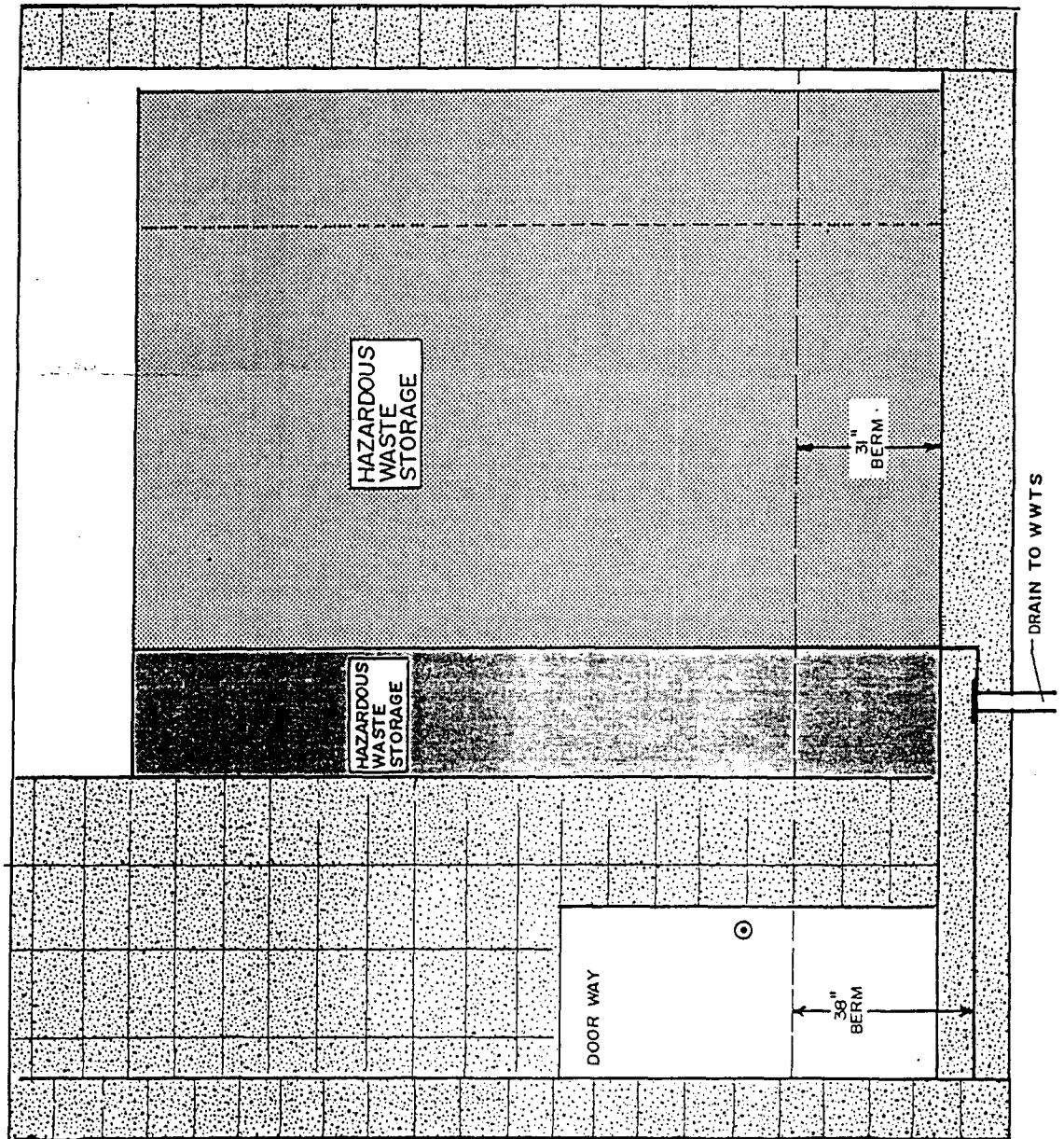
The only hazardous waste stream which shall be stored in the bulk tank storage area shall be the waste stream indicated in Table SFC-2 (i.e.,

FIGURE SFC-8



WASTE STORAGE TANKS
Mac DERMID, INC.
526 HUNTINGDON AVE
WATERBURY, CT

FIGURE SFC-9



HAZARDOUS WASTE
STORAGE TANKS
CROSS SECTION A-A
MACDERMID, INC.
526 HUNTINGDON AVE.
WATERBURY, CT.

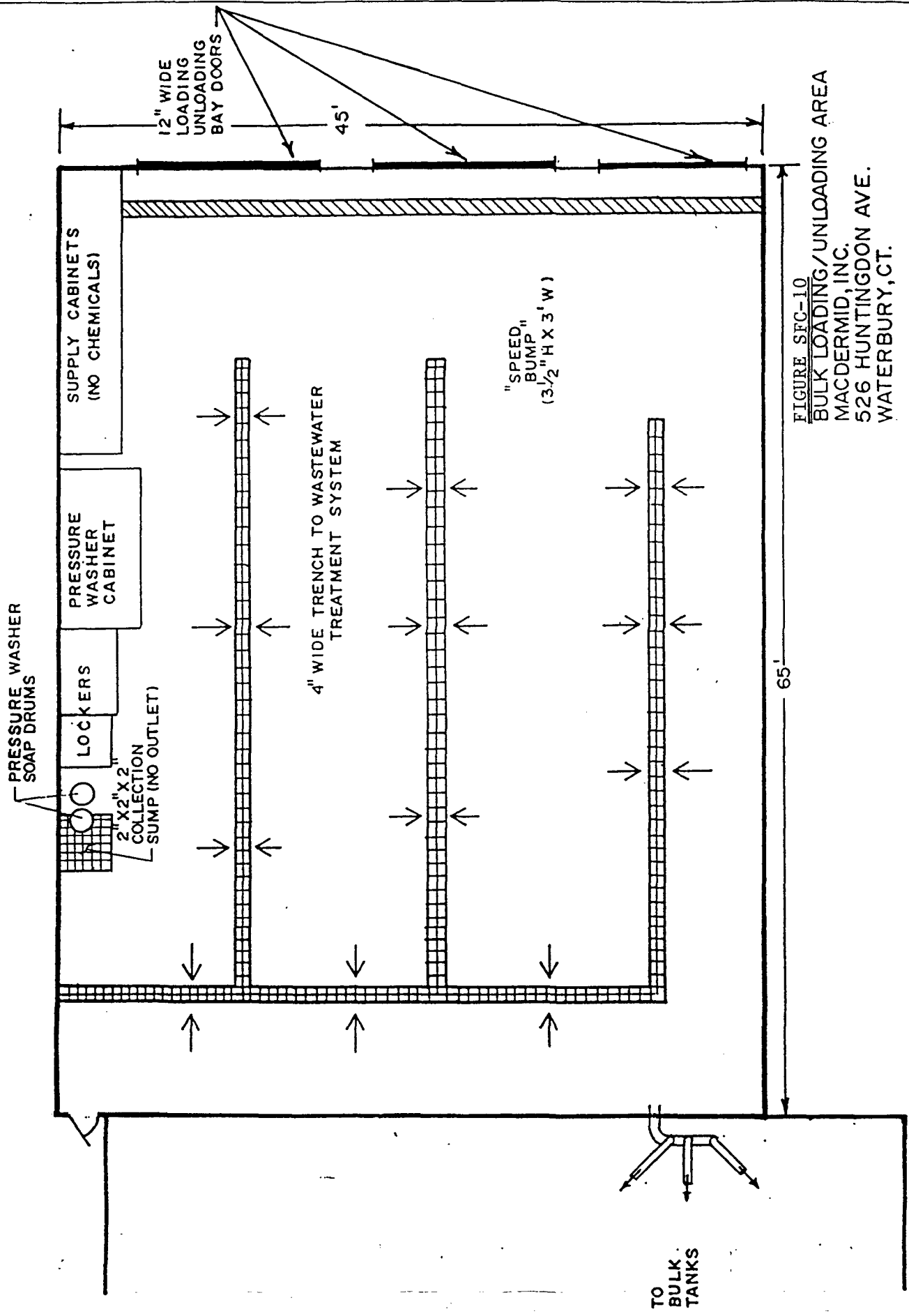


FIGURE SFC-10
 BULK LOADING/UNLOADING AREA
 MACDERMID, INC.
 526 HUNTINGDON AVE.
 WATERBURY, CT.

TABLE SFC-3

WASTE STORAGE TANK DIMENSIONS AND CAPACITIES*

<u>TANK #</u>	<u>TANK DIMENSIONS</u>	<u>STORAGE CAPACITY</u>
1	9'8" Diameter 14'6" High	8000 Gallons
2	9'8" Diameter 14'6" High	8000 Gallons
3	9'8" Diameter 14'6" High	8000 Gallons
4	10'0" Diameter 9'0" High	5000 Gallons

*See Tables SFC-1 and SFC-2 for a listing of the total storage area capacity, waste code numbers, and allowable waste streams which may be stored in the bulk tank storage area.

- waste copper etchant). The bulk tank storage area shall not be utilized to store any non-hazardous wastes or other materials unless the waste or other material has been demonstrated as being compatible with waste copper etchant per Section 6 of the waste analysis plan (Attachment A).
5. The secondary containment structures of the bulk tank storage area shall be maintained and repaired as necessary to ensure that secondary containment equals or exceeds 10% of the total capacity of the area plus the volume of the largest tank. The secondary containment volume shall be reduced by the volume of any structures, devices, equipment or other objects contributing to negative volume within the containment area.
 6. The Permittee shall maintain and repair the bulk waste storage tanks and their foundations and appurtenant structures so as to ensure that the tanks are capable of withstanding the maximum loading they will be subjected to without leakage or structural failure.
 7. The Permittee shall maintain the sight gauges and high level alarms of the bulk tanks so as to prevent overfilling and overtopping of these units.
 8. The Permittee shall maintain the tank trailer pads and bulk tank containment structures of the bulk loading/unloading and bulk tank storage areas so as to prevent run-on and accumulation of precipitation in the areas, and so as to prevent spills and leakages in the areas from reaching and contaminating on-site soils or groundwater.
 9. Bulk shipments of hazardous waste shall not be received at the facility unless appropriately trained and duly designated personnel are present at the facility to ensure that the waste is properly inspected, manifested, transferred, processed, tested, and stored.
 10. At the time of initial receipt, and when preparing for shipment off-site, bulk shipments of hazardous waste shall be inspected to ensure that they correspond with the identities indicated on the manifests, and that the manifests and other required documentation are complete. No shipment shall be sent off-site or received from off-site unless it matches the identity indicated on the manifest and is accompanied by all the required paperwork, including a properly executed manifest.
 11. The Permittee shall maintain sufficient floor space in the bulk tank storage area and bulk loading/unloading area to allow for unobstructed movement of personnel, fire protection equipment, and spill control equipment to all portions of each area.

12. The Permittee shall have conducted the compatibility screening described in Section 6 of the waste analysis plan (herein included as Attachment A) prior to placing a hazardous waste or other material into the bulk tank storage area.
13. The base and berms of the bulk tank storage area must be coated with Stonhard Stonclad HT epoxy coating or a similar coating of equivalent chemical resistance to the wastes stored in this area. The coating must be re-applied as soon as possible, but no later than thirty (30) days of discovering that the integrity of the coating has been impaired due to wear, cracks, blistering, or other causes. Hazardous wastes must not be stored in the bulk tank storage area if the integrity of the coating or containment area is impaired.
14. The Permittee shall maintain the slope of the bulk storage tank area and bulk loading/unloading area as shown in Figures SFC-8, 9, and 10 and as may otherwise be described herein so as to drain and remove liquids resulting from leaks, spills, or precipitation, and to provide adequate containment capacity.
15. Wastes which accumulate in the bulk tank storage area and bulk loading/unloading area shall be managed as a hazardous waste unless it can be demonstrated that the materials are not hazardous wastes pursuant to 40 CFR Part 261. The presence of any listed hazardous waste (as found in 40 CFR Part 261, Subpart D) above detection limits (using appropriate methods in EPA publication SW-846) shall cause that material to be a hazardous waste.
16. The Permittee shall inspect the bulk loading and unloading area and bulk storage tank area in accordance with the inspection schedule incorporated herein as Attachment E.
17. The Permittee shall close the bulk tank storage area in accordance with the facility closure plan, incorporated herein as Attachment C, and as modified herein.
18. In calculating the required secondary containment capacity, in determining compatibility and allowed storage capacities, and with regard to all other restrictions on the bulk tank storage area, the Permittee shall consider and include any virgin chemical products, manufactured chemical products, non-hazardous wastes, or other materials which might be present in that area.
19. The Permittee shall operate the bulk tank storage area in accordance with the restrictions in Condition II.A.38 above for land-banned wastes.
20. The wastes stored in the bulk tank storage area shall kept from freezing at all times.

21. Secondary containment systems for the bulk storage tanks must be:

- (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system, and
- (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

22. To meet the requirements of Condition II.B.21. above, secondary containment systems must be at a minimum:

- (1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydraulic forces), physical contact with the waste to which it is exposed, climatic conditions (including stresses from nearby vehicular traffic).
- (2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;
- (3) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the Commissioner of DEP that existing detection technologies or site conditions will not allow detection of a release within 24 hours;
- (4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the Commissioner of DEP that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours;

- (5) Constructed with chemical-resistant water stops in place at all joints (if any); and,
- (6) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration or waste into the concrete.

23. General Operating Requirements.

- a.) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.
- b.) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:
 - (1) Spill prevention controls (e.g. check valves, dry disconnect couplings);
 - (2) Overfill prevention controls (e.g. level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
 - (3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.
- c.) The owner or operator must comply with the requirements of Condition II.B.25 below if a leak or spill occurs in the tank system.

24. Inspections.

- a.) The owner or operator must develop and follow a schedule and procedure for inspection overfill controls.
- b.) The owner or operator must inspect at least once each operating day:
 - (1) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;
 - (2) Data gathered from monitoring and leak detection equipment (e.g. pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

- (3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g. dikes) to detect erosion or signs of releases of hazardous waste (e.g. wet spots, dead vegetation).

- c.) The owner or operator must document in the operating record of the facility an inspection of those items in paragraphs a. through c. of this condition.

25. Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements:

- a.) Cessation of Use; prevent flow or addition of wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

- b.) Removal of waste from tank system or secondary containment system.

- (1) If the release was from the tank system, the owner/operator must, within 24 hours after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

- (2) If the material released was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

- c.) Containment of visible releases to the environment. The owner/operator must immediately conduct a visual inspection of the release and, based upon that inspection:

- (1) Prevent further migration of the leak or spill to soils or surface water; and

- (2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

d.) Notification reports.

- (1) Any release to the environment, except as provided in paragraph d.(2) of this section, must be immediately reported to the Commissioner of DEP.
- (2) A leak or spill of hazardous waste is exempted from the requirements of this paragraph if it is:
 - i. Less than or equal to a quantity of one (1) pound, and
 - ii. Immediately contained and cleaned up.
- (3) Within 15 days of detection of a release to the environment, a report containing the following information must be submitted to the Commissioner of DEP:
 - i. Likely route of migration of the release;
 - ii. Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
 - iii. Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Commissioner as soon as they become available;
 - iv. Proximity to downgradient drinking water, surface water, and populated areas; and,
 - v. Description of response actions taken or planned.

e.) Provision of secondary containment, repair, or closure.

- (1) Unless the owner/operator satisfies the requirements of paragraphs e.(2) through (4) of this section, the tank system must be closed in accordance with 40 CFR 264.197, and the facility closure plan.

- (2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
 - (3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.
 - (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Permit Conditions II.B.21 and II.B.22 above before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (f) of this section are satisfied. If a component is replaced to comply with the requirements of this subparagraph, that component must satisfy the requirements for new tank systems or components in 40 CFR Sections 264.192 and 264.193. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g. the bottom of an inground or on-ground tank), the entire component must be provided with secondary containment in accordance with 40 CFR 264.193 prior to being returned to use.
- f.) Certification of major repairs. If the owner/operator has repaired a tank system in accordance with paragraph e. of this section, and the repair has been extensive (e.g. installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified, registered, professional engineer in accordance with 40 CFR 270.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Commissioner of DEP within seven days after returning the tank system to use.

26. Special requirements for incompatible wastes.

- a.) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank system unless 40 CFR 264.17(b) is complied with.
- b.) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless 40 CFR 264.17(b) is complied with.

C. Compliance Schedule

The Permittee shall comply with the below requirements within the indicated timeframes:

1. Within 60 days of permit issuance, the Permittee shall:
 - a.) seal the metal hydroxide/sulfide roll-off storage area surface with a sealer capable of preventing migration of liquids spilled in this area to subgrade, while resisting physical abrasion and chemical attack; and,
 - b.) extend the sealed portion of all other hazardous waste storage areas upward at least to the height of the required secondary containment.
2. Within 60 days of permit issuance, the Permittee shall have installed pumps and hard piping to transfer waste copper etchant from the bulk storage tanks to the recycling process. This piping system shall replace the portable pumps and hoses currently used, and shall comply with any relevant conditions in Section II.B., and any other applicable Sections of this permit.
3. Within 60 days of permit issuance, the Permittee shall have completed the following changes in the QC Area (Waste Staging Area):
 - a.) install a berm of sufficient height to create secondary containment equal to ten percent of the total storage capacity, plus the largest container, per Figure SFC-7 and the storage limits set in permit condition II.A.3 above. The amount of secondary containment must be reduced by any negative volumes present (i.e., containers, structures, equipment, etc., in the secondary containment zone).
 - b.) seal the containment surfaces of the area with a sealant capable of withstanding exposure to the used surface finishing chemicals which are processed in this area, as well as the physical abrasion caused by container transfer activities.

4. In each area where sealant is to be applied in response to Conditions 1-3 above, the Permittee shall, prior to application of the sealant, remove all wastes and waste residues, and ensure that the containment surface is clean, dry, and otherwise adequately prepared so as to allow the sealant to bond tightly to it.

D. Imminent Hazard Actions

1. Notwithstanding any other provisions of this permit, enforcement actions may be brought pursuant to Section 7003 of RCRA, Section 22a-7 of the Connecticut General Statutes, or any other applicable law, when the Regional Administrator of EPA or the Commissioner of DEP is in receipt of evidence that the handling, storage, treatment, or disposal of any hazardous waste may present an imminent and substantial endangerment to health or the environment.

E. Required Notices

1. The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the Commissioner of DEP in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.
2. Prior to receiving hazardous waste from an off-site source (except where the Permittee is also the generator), the Permittee shall inform the generator in writing that he has the appropriate permit(s) for, and will accept the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.
3. Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the Permittee must notify the new owner or operator in writing of the requirements of 40 CFR Parts 270 and 264, and of Connecticut's Hazardous Waste Management Regulations.

F. Waste Analysis

1. The Permittee shall follow the procedures described in the attached waste analysis plan, incorporated herein as Attachment A.
2. The Permittee shall keep the waste analysis plan at the facility at all times until final closure of the Facility.

3. The Permittee shall at all times have available for inspection and review by DEP or EPA copies of all forms, procedural documents, manuals, etc., used to achieve compliance with the waste analysis plan.
4. The Permittee shall maintain in the operating record copies of all information required to demonstrate compliance with the waste analysis plan. This specifically includes, but is not limited to: 1) waste characterization of each waste stream as required by Sections 1, 2, and 4 of the plan, 2) waste verification (i.e. spot testing) of each shipment of off-site wastes as required by Section 3 of the plan, and 3) compatibility testing as required by Section 6 of the plan.
5. Unless otherwise specified, all testing and analytical work performed in accordance with the facility waste analysis plan shall be as specified in the EPA document SW-846, Test Methods for Evaluating Hazardous Waste, November, 1986, or as most recently updated.
6. In addition to the circumstances indicated in the waste analysis plan, hazardous wastes received from off-site shall be recharacterized whenever an unexpected reaction, fume generation, or other significant process upset occurs in the recycling operation.

G. Security

1. The Permittee shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of its Facility.
2. The Permittee shall ensure the following:
 - a) All entrances to the Huntingdon Avenue facility must be locked at all times unless attended by facility personnel who are specifically instructed to receive and properly escort visitors to the appropriate personnel or department expecting the visitor.
 - b) Signs bearing the legend, "Danger - Unauthorized Personnel Keep Out", shall be posted at each entrance to each active portion of the Facility and at other locations in sufficient numbers to be seen from any approach to this active portion. The legend shall be written in English and shall be legible from a distance of at least 25 feet.

- c) The Permittee shall maintain all security systems in good repair throughout the active life of the facility. If the Permittee ever discontinues use of the ADT/Sonitrol security systems, the commissioner of DEP must be notified in writing of the change, as well as how the system will be replaced so as to maintain equivalent security on-site.

H. General Inspection Requirements

1. The Permittee shall inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing, or may lead to:
 - (1) release of hazardous waste constituents to the environment, or
 - (2) a threat to human health.

The Permittee shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

2. The Permittee shall follow the inspection schedule incorporated herein as Attachment E, and as may be modified herein. The Permittee shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.
3. The Permittee shall keep the inspection schedule at the facility at all times.
4. Records of inspections shall be kept as required by 40 CFR 264.15(d) and Section II.N. of this permit, and shall contain such information and shall be on such forms as prescribed by Attachment E of this permit. These records must be kept for at least three years from the date of inspection.

I. Personnel Training

1. The Permittee shall conduct personnel training as required by 40 CFR 264.16. This training program shall follow the outline herewith included as Attachment D, and as modified herein. Specific modifications to the training program shall include the following:

- a) All personnel who obtain samples of hazardous waste or other materials that are required by this permit shall be properly trained in the appropriate sampling methods and sample handling procedures described in EPA Publication SW-846.
 - b) All personnel who conduct analysis of samples of hazardous waste or other materials that are required by this permit shall be properly trained in the appropriate analytical procedures specified by the waste analysis plan (Attachment A).
- 2. Facility personnel must successfully complete the training program outlined by Attachment D and as modified herein within six (6) months after the effective date of their employment or assignment to the facility, or to a new position at the facility, whichever is later. Employees must not work in unsupervised positions until they have completed the training program.
 - 3. Facility personnel shall take part in an annual review of the initial training specified in Attachment D.
 - 4. The Permittee shall maintain the following documents and records at the facility:
 - a) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job; and
 - b) A written job description for each position listed under Permit Condition II.I.4.a. above. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position.
 - c) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position covered by Permit Condition II.I.4.a. above.
 - d) Records that document that the training or job experience required by 40 CFR Part 264.16(a)-(c), as well as that specified in Attachment C, has been given to, and completed by, facility personnel.

5. The Permittee shall keep training records on current personnel until closure of the facility, and training records on former employees for at least three (3) years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.
6. The training director shall be a person who is trained in hazardous waste management and who is capable, through a combination of training and/or experience, of properly training facility employees in all facets of hazardous waste handling, storage, and recycling.

J. General Requirements for Ignitable, Reactive, or Incompatible Waste.

1. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste shall be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting, and welding, hot surfaces, frictional heat, sparks, (static, electrical, or mechanical), spontaneous ignition (e.g. from heat producing chemical reactions), and radiant heat. All open flames, cutting, and welding shall be allowed only with the approval and under the direct supervision of the Compliance Administrator or Emergency Coordinators. While ignitable or reactive waste is being stored, handled, or otherwise managed in any portions of the facility, no smoking shall be allowed. "No Smoking" signs must be conspicuously placed in hazardous waste storage and handling areas, and wherever there is a hazard from ignitable or reactive waste.
2. The Permittee shall take precautions to prevent reactions which:
 - a) Generate extreme heat or pressure, fire or explosions, or violent reactions;
 - b) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
 - c) Produce uncontrolled flammable fumes or gases in sufficient quantities to threaten human health or the environment;
 - d) Damage the structural integrity of the devices or facility;
 - e) Through other like means, threaten human health or the environment.

3. When required to comply with Conditions II.J.1. and II.J.2. above, the Permittee must document that compliance in accordance with Section 6 of the waste analysis plan (Attachment A).

K. Preparedness and Prevention

1. The Permittee shall design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste or hazardous waste constituents to air soil, or surface water which could threaten human health or the environment.
2. The Permittee shall equip the facility with, at a minimum, the emergency equipment specified in Table 10.2 and Figure 10.1 of the facility contingency plan, herein included as Attachment B.
3. The Permittee shall maintain and test (where appropriate), in order to assure proper operation in time of emergency, all facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment.
4. The Permittee shall ensure that all personnel involved in an operation in which hazardous waste is being poured, mixed, spread, or otherwise handled have immediate access to an emergency alarm or emergency communication device, either directly or through visual or voice contact with another employee.
5. The Permittee shall within thirty (30) days of issuance of this permit submit copies of the approved contingency plan by certified mail to appropriate police, fire departments, hospitals, and emergency response teams in the vicinity of the Facility, including, but not necessarily limited to:
 - o Waterbury Police Department
 - o Waterbury Fire Department
 - o Waterbury Hospital
 - o St. Mary's Hospital
 - o Waterbury Health Department, Hazardous Materials Division
 - o CT State Fire Marshall's Office
 - o Local emergency planning officials
6. The Permittee shall notify the above listed local emergency officials whenever any changes occur in the facility layout or operation, or in the contingency plan itself, which might affect contingency plan implementation or execution.

7. For at least the term of this permit, the Permittee shall retain in the operating record, copies of letters and certified mail receipts required by Permit Conditions II.K.5. and II.K.6. above, and documentation of any responses to those letters.

L. Contingency Plan

1. The Permittee shall immediately carry out the provisions of the contingency plan, incorporated herein as Attachment B, and follow the emergency procedures described below, whenever there is a fire, explosion, or release of hazardous waste or constituents which threatens or could threaten human health or the environment:
 - a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or designated alternate emergency coordinator) must immediately:
 - (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
 - (2) Notify appropriate State or local agencies with designated response roles if their help is needed.
 - b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.
 - c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).
 - d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

- (1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local and state authorities, as well as the Community Alert Network System as described in Attachment B. He must be available to help appropriate officials decide whether local areas should be evacuated; and
- (2) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area, (in the applicable regional contingency plan under 40 CFR Part 1510) or the National Response Center (using their 24-hour toll free number 1-800-424-8802). The report must include:
 - i. Name and telephone number of reporter;
 - ii. Name and address of facility;
 - iii. Time and type of incident (e.g., release, fire);
 - iv. Name and quantity of material(s) involved, to the extent known;
 - v. The extent of injuries, if any, and
 - vi. The possible hazards to human health, or the environment, outside the facility.
- e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, reoccur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.
- f) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.
- g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

- h) The emergency coordinator must ensure that, in affected area(s) of the facility:
 - (1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
 - (2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
 - i) The Permittee must notify the Commissioner of DEP and the appropriate State and local authorities that the facility is in compliance with permit Condition II.L.1.h before operations are resumed in the affected area(s) of the facility.
 - j) The Permittee must note in the operating record the time, date and details of any incident that requires implementing the contingency plan. Within fifteen (15) days after the incident, he must submit a written report on the incident to the Commissioner of DEP. The report must include:
 - (1) Name, address, and telephone number of the owner or operator;
 - (2) Name, address, and telephone number of the facility;
 - (3) Date, time, and type of incident (e.g., fire, explosion);
 - (4) Name and quantity of material(s) involved;
 - (5) The extent of injuries, if any;
 - (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
 - (7) Estimated quantity and disposition of recovered material that resulted from the incident.
2. The Permittee shall maintain at the facility a copy of the contingency plan, and all revisions to the plan, at all times. The emergency coordinator and alternate emergency coordinators, production supervisors, and any other personnel involved in contingency plan implementation shall receive copies of all updates to the contingency plan, and shall be briefed on the implications of any such changes.

3. The Permittee shall review and immediately amend, if necessary, the contingency plan whenever:
 - a) this Permit is revised;
 - b) the plan fails in an emergency;
 - c) the facility changes - in its design, construction, operation, maintenance, or other circumstances - in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
 - d) the list of emergency coordinators changes; or
 - e) the list of emergency equipment changes.

The Permittee shall submit to DEP, in writing, any modifications to the contingency plan. These modifications shall be accompanied by a request for permit modification in accordance with 40 CFR 270.41-42 and Section 22a-449(c)-16(c) of the Regulations of the Connecticut State Agencies.

4. The Permittee shall ensure that at all times there shall be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.
5. If the Permittee ever discontinues use of the Community Alert Network System described in the facility contingency plan (Attachment B), the Permittee shall modify the contingency plan to include the proposed alternate method of emergency notification. This modification shall be made in accordance with 40 CFR 270.41-42 and Section 22a-449(c)-16 of the Regulations of the Connecticut State Agencies.

6. The Permittee shall only take on the management of spills of an incidental nature (i.e. individual leaking tanks and containers, less-than-one-container-quantity spills, and similarly-sized incidents). Releases of greater size, as well as cleanup operations in response to such incidents shall be managed only by qualified outside contractors.

M. Manifest System

1. Whenever the Permittee receives hazardous waste accompanied by a manifest, the Permittee or his/her agent shall:
 - a.) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;
 - b.) Note any significant discrepancies (as defined below in Condition II.M.3.) in the manifest on each copy of the manifest;
 - c.) Immediately give the transporter at least one copy of the signed manifest;
 - d.) Within 30 days after the delivery, send a copy of the manifest to the generator and to the DEP; and,
 - e.) Retain at the facility a copy of each manifest for at least three years from the date of delivery.
2. Whenever a shipment of hazardous waste is initiated from a facility, the Permittee shall comply with the requirements of 40 CFR 262 and Section 22a-449(c)-5 of Connecticut's Hazardous Waste Management Regulations.
3. Upon discovering a significant manifest discrepancy, the Permittee shall attempt to reconcile the discrepancy with the waste generator and/or transporter. If the discrepancy is not resolved within 15 days after receiving the waste, the Permittee shall immediately submit to the Commissioner of DEP a letter describing the discrepancy and his attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

For the purposes of this condition, manifest discrepancies are defined as differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are defined as follows:

- (1) For bulk waste, variations greater than 10 percent in weight, and
- (2) For batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload.

Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

4. If the facility rejects a shipment of hazardous waste or accepts hazardous waste for storage without an accompanying manifest or shipping paper, and if the waste is not excluded from the manifest requirements by 40 CFR 261.5 and Sections 22a-449(c)-1 through -43 of the Connecticut Hazardous Waste Management Regulations, the Permittee shall prepare and submit a single copy of a report to the Commissioner of DEP within 15 days after receiving the waste. The report shall be in written form and include the following information:
 - a) The EPA identification number, name, and address of the facility;
 - b) The date the facility received the waste;
 - c) The EPA identification number, name, and address of the generator and the transporter, if available;
 - d) A description and the quantity of each unmanifested hazardous waste received or rejected;
 - e) The method of treatment, storage or disposal of each hazardous waste;
 - f) The certification signed by the owner or operator of the facility or his authorized representative; and
 - g) A brief explanation of why the waste was unmanifested, if known.

N. Operating Record

1. The Permittee must keep a written operating record at his facility.
2. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

- a) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment or storage at the facility as required by Appendix I of 40 CFR Part 264.
- b) The location of each hazardous waste within the facility and the quantity at each location. This information must include cross-references to specific manifest document numbers, if the waste accompanied by a manifest.
- c) Records and results of waste analyses performed as specified in Permit Conditions II.F.1-6; the facility waste analysis plan (herein included as attachment A); and 40 CFR Parts 264.13, 264.17, 268.4(a), and 268.7.
- d) Summary reports and details of all incidents that require implementing the contingency plan as specified in Permit Condition II.L.1.j;
- e) Records and results of inspections as required by Permit Conditions II.H.1-4, and the inspection schedule (herein included as Attachment E), except these data need be kept only three years;
- f) Monitoring, testing, or analytical data where required by 40 CFR Part 264 Subpart F, 40 CFR Parts 264.174, 264.191, 264.193, and 264.195, and the provisions of this permit.
- g) For off-site facilities, notices to generators as specified in Permit Condition II.E.2.
- h) All closure cost estimates required under 40 CFR Part 264.142.
- i) A certification by the Permittee no less often than annually, that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.
- j) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to 40 CFR Part 268.5 or a petition pursuant to 40 CFR Part 268.8, and the notice required by a generator under 40 CFR Part 268.7(a)(3).

- k) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under 40 CFR Part 268.7 or 268.8.
 - l) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration, if applicable, required by the generator or the owner or operator under 40 CFR Part 268.7 or 268.8.
 - m) For an off-site storage facility, a copy of the notice and the certification and demonstration if applicable, required by the generator or the owner or operator under 40 CFR 268.7 or 268.8.
 - n) For an on-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under 40 CFR Part 268.7 or 268.8.
 - o) Any other information that may be required by Sections II.A, B, F, H, I, J, K, L, M, Q, and R, and Attachments A through E of this permit.
3. In addition to the informational requirements outlined above, the Permittee shall at all times retain in the facility operating record, the previous two years' batch cards confirming the quantities of hazardous wastes recycled over this time period.

O. Availability, Retention, and Disposition of Records

- 1. All records, including plans, required under 40 CFR Parts 264 and 270, Section 22a-449(c) of the Regulations of the Connecticut State Agencies, and this permit must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of DEP who is duly designated by the the Commissioner.
- 2. The retention period for all records required under 40 CFR Parts 264 and 270, Section 22a-449(c) of the Regulations of the Connecticut State Agencies, and this permit is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Regional Administrator of EPA or the Commissioner of DEP.

P. Annual Report

The Permittee must prepare and submit an annual report to the Commissioner of DEP by March 1 of each year on such forms as the Commissioner may direct.

Q. Closure

1. The Permittee shall close the facility in a manner that
 - a.) minimizes the need for further maintenance;
 - b.) controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface water or to the atmosphere; and
 - c.) complies with the closure requirements of 40 CFR Part 264.178, 264.197, and 264.228.
2. The Permittee shall close the hazardous waste units of the facility in accordance with the applicable sections of the facility closure plan, herewith included as attachment C, as modified herein. All interpretations as to parameter selection, determination of clean-closure, background values, etc., shall be reserved by the Commissioner of DEP.
3. A copy of the closure plan and all approved revisions to the closure plan shall be submitted to the Commissioner of DEP upon request and shall be kept at the Facility until closure is completed and certified.
4. The Permittee shall submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in 40 CFR Parts 124 and 270. The written notification or request must include a copy of the amended closure plan for review or approval by the Commissioner of DEP.
 - a.) The Permittee may submit a written notification or request to the Commissioner of DEP for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility. A copy of the proposed amended plan must be included with the request.

b.) The Permittee shall submit a written request to the Commissioner of DEP for a permit modification to authorize a change in the approved closure plan whenever:

- i) Change in operating plans or facility design affect the closure plan; or
- ii) There is a change in the expected year of closure; or
- iii) In conducting partial or final closure activities, unexpected events occur requiring a modification of the approved closure plan; or
- iv) New or additional information becomes known which requires a modification of the approved closure plan.

A copy of the proposed amended plan must be included with the request.

5. The Permittee shall submit a written request of a permit modification to the Commissioner of DEP, including a copy of the proposed amended closure plan, for approval at least sixty (60) days prior to the proposed change in facility design or operation, or no later than sixty (60) days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the Permittee shall request a permit modification no later than thirty (30) days after the unexpected event.
6. The Commissioner of DEP may request modifications to the plan under the conditions described in Permit Condition II.Q.5. above. The Permittee shall submit the modified plan within sixty (60) days of the request by the Commissioner of DEP, or within 30 days if the change in facility conditions occurs during partial or final closure.
7. The date when the Permittee "expects to begin closure" must either be no later than thirty (30) days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous waste. The Permittee shall notify the Commissioner of DEP in writing at least 45 days prior to the date on which he expects to begin final closure of the facility.

8. The Permittee shall complete the closure activities in accordance with the closure plan, incorporated herein as Attachment C, and as may be modified herein, within one hundred eighty (180) days after receiving the final volume of waste.
9. The Permittee shall properly dispose of or decontaminate all facility equipment and structures associated with hazardous waste storage and processing activities in accordance with the closure plan, herewith included as Attachment C, and as modified herein.
10. Nothing in Section II.Q. shall preclude the Permittee from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.
11. Within sixty (60) days of the completion of final closure, the Permittee shall submit to the Commissioner of DEP, certification both by the Permittee and by an independent registered professional engineer that the hazardous waste portions of the facility have been closed in accordance with the specifications in the approved facility closure plan, herein included as Attachment C, and as may be modified herein. The certification must be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Commissioner of DEP upon request until he or she releases the owner or operator from the financial assurance requirements for closure under 40 CFR 264.143(i).
12. If it is determined that the containment area of the bulk tank system has leaked to subgrade, and that not all contaminated soils can be practicably removed or decontaminated as required by 40 CFR 264.197(a), then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (i.e. 40 CFR 264.310). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in Subparts G and H of 40 CFR 264.

R. Financial Responsibility

1. The Permittee shall have and maintain at the facility, pursuant to 40 CFR Part 264.142, a written estimate for the cost of closing the facility in accordance with the approved closure plan.

2. The Permittee shall adjust the closure cost estimate for inflation in accordance with procedures specified in 40 CFR Part 264.142(b). The adjustment shall be made by October 1 of each year. The latest adjusted closure cost estimate shall be kept at the facility, and a signed original shall be submitted to the Commissioner within fourteen (14) days of preparation.
3. The Permittee shall revise the closure cost estimate whenever a change in the approved closure plan increases the cost of closure. The revised closure cost estimate shall then be adjusted for inflation as specified in Condition II.R.2. above.
4. The Permittee shall in accordance with 40 CFR Part 264.143 or 40 CFR Part 264.149, establish and continuously maintain financial assurance for closure of the facility. Such financial assurance shall be maintained until the Commissioner of DEP notifies the Permittee in writing that the maintenance of financial assurance for closure is no longer required for the facility.
5. The wording of the financial assurance mechanism(s) secured for the purpose of compliance with Condition II.R.4. above shall be identical to the wording specified in 40 CFR Part 264.151, except that all references to the Regional Administrator of the EPA shall be changed to the Commissioner of DEP.
6. The Permittee shall in accordance with 40 CFR Part 264.147(a) or 40 CFR Part 264.149 establish and continuously maintain liability coverage for sudden accidental occurrences at the facility. The liability coverage shall be in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal costs. The liability coverage shall be maintained until the certification of final closure required by Permit Condition II.Q.11. is received by the Commissioner of DEP, unless the Commissioner has reason to believe that closure has not been executed in accordance with the approved closure plan.
7. The wording of the liability insurance documentation submitted for the purposes of compliance with Permit Condition II.R.6. above shall be identical to the wording specified in 40 CFR Part 264.151, except that all references to the "Regional Administrator of EPA" shall be changed to the "Commissioner of DEP."

8. The Permittee shall comply with the requirements of 40 CFR Part 264.148 in the event of incapacity of the owner or operator, guarantors or financial institutions.

SECTION III: ATTACHMENTS

Attachment A - Waste Analysis Plan

Attachment B - Contingency Plan

Attachment C - Closure Plan

Attachment D - Training Plan

Attachment E - Inspection Schedule

ATTACHMENT A

WASTE ANALYSIS PLAN

ATTACHMENT A

WASTE ANALYSIS PLAN

1.) Characterization of Off-Site, Customer's Wastes.

- a.) Before the permittee treats, stores, or recycles off-site customer's hazardous waste, he shall obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis shall contain all the information which must be known to treat, store, or dispose of the waste in accordance with the conditions of this permit.
- b.) The waste characterization methods described in this section shall be utilized for:
 - i. first-time analysis of off-site customer's wastes (initial characterization),
 - ii. annual recharacterization of off-site customer's wastes,
 - iii. recharacterization in response to significant raw material or process changes, and
 - iv. investigative recharacterization of off-site customer's wastes, as described in section 3 of this attachment.
- c.) The constituents that each waste stream shall, at a minimum, be analyzed for are listed in Table WA-1 of this attachment. Only the waste streams indicated in Table WA-1 shall be accepted from off-site customers for storage or recycling by MacDermid, Inc. Furthermore, only off-site customer's wastes which lie within the allowable concentration ranges as indicated in Table WA-1 shall be accepted for storage or recycling by MacDermid, Inc.
- d.) All new and existing customers wishing to return a used surface finishing chemical (i.e., the wastes in Table WA-1) to MacDermid, Inc. for recycling for the first time must do the following:
 - i. Collect a representative sample of the waste(s) to be returned.
 - ii. Transport and submit this sample in accordance with the instructions in MacDermid's generator certification package.
 - iii. Complete the generator certification package as prescribed by MacDermid, Inc.

First-time customer's wastes may only be accepted once the generator certification package has been completed and submitted to MacDermid, Inc., and the waste analyses specified in Table WA-1 have been completed. MacDermid must retain the generator certification and the results of all characterization analyses for at least three years, or until termination of the customer contract, whichever is longest.

- e.) All off-site customer's wastes shall be recharacterized annually and whenever significant raw material or process changes occur.

Table WA-1

**USED SURFACE FINISHING CHEMICALS RECEIVED FROM OFF-SITE:
WASTE STREAM DESIGNATIONS AND ALLOWABLE CONCENTRATIONS
FOR SELECTED WASTE PARAMETERS**

EPA Hazardous Waste Number	Material Description	Waste Constituent	Allowable' Conc. Range	Hazard	Handling Method
D002/D008	Copper Etchant	Water ¹	Balance	Corrosive Toxic	S01 & S02
		Ammonia ¹	40-200 g/l		
		Chloride ¹	100-250 g/l		
		Copper	0-200,000 ppm		
		Zinc	0-2,000 ppm		
		Tin	0-200 ppm		
		Lead	5-200 ppm		
		Iron	0-30 ppm		
		Nickel	0-20 ppm		
		pH	8-10		
		EPA Method 8010	Not Detectable		
		Chlorinated Hydrocarbons			
D002	Solder Conditioner	Water ¹	500-850 g/l	Corrosive Toxic	S01
		Ammonium Chloride ¹	60-200 g/l		
		Hydrochloric Acid ¹	80-175 g/l		
		Fluoride	0-20 ppm		
		Copper	0-3,000 ppm		
		Iron	0-500 ppm		
		pH	≤2.0		
		EPA Method 8010	Not Detectable		
		Chlorinated Hydrocarbons			
D002/D008	Solder Stripper	Water ¹	Balance	Toxic	S01
		Hydrogen Peroxide ¹	0-190 g/l		
		Ammonium Bifluoride ¹	90-300 g/l		
		Chloride	0-1,000 ppm		
		Copper	0-8,000 ppm		
		Tin	2,000-75,000 ppm		
		Lead (soluble)	5-100 ppm		
		Iron	0-200 ppm		
		Nickel	0-20 ppm		
		pH	3.5 to 6		
		EPA Method 8010	Not Detectable		
		Chlorinated Hydrocarbons			

¹ These constituents which are the major components of the raw products will not be analyzed for when waste shipments are received. They have been provided solely for the purpose to determine compatibility with other waste streams

2.) Characterization of On-Site Wastes and Wastes Received from MacDermid's 245 Freight Street Facility.

- a.) The waste characterization methods described in this section shall be utilized for each shipment of waste generated on-site, and each shipment of waste received from MacDermid's 245 Freight Street facility in Waterbury, CT. The characterization of these wastes shall consist of a combination of the following resources:
 - i. Raw Product Data: Data obtained from manufacturers pertaining to raw materials, products, or similar materials may be used when appropriate. This may include, but is not limited to, manufacturer's specifications and material safety data sheets.
 - ii. Process Information: Knowledge of the process generating the waste may be used when appropriate. This includes published or documented data on the process or chemical knowledge of the process.
 - iii. Waste Analysis: In addition to process and/or raw product data, certain chemical analyses shall be performed on the wastes prior to their shipment from the 245 Freight Street facility.
- b.) These waste characterizations shall generate sufficient information to properly store, recycle, and/or dispose of each shipment of waste received from the 245 Freight Street facility or generated on-site.
- c.) The following special procedures shall be utilized for wastes received from the 245 Freight Street facility:
 - i. The generating department at 245 Freight Street shall have each shipment of waste analyzed for the constituents listed in Table WA-2.
 - ii. The generating department shall submit this data, and any other information required by the compliance administrator, in the form of a completed waste report. This report shall be retained in the operating record for a period of at least three years. Examples of such report forms have been included as Appendix 1 of this attachment.
 - iii. Only the waste streams indicated in Table WA-2 shall be accepted from the 245 Freight Street facility by the permittee. Furthermore, only 245 Freight Street facility wastes which lie within the allowable concentration ranges as indicated in Table WA-2 shall be accepted for storage by the permittee.

d.) The following special procedures shall be utilized for wastes generated on-site:

- i. Used surface finishing chemicals, off-specification surface finishing chemicals or surface finishing chemicals otherwise rendered unfit for sale to customers:
 - (A) Each volume of waste surface finishing chemicals which has been slated for recycling, or which are to be stored pending off-site disposal, shall be spot-tested in accordance with Section 3 of this Attachment.
 - (B) Any volume of waste which does not meet the spot test parameters in Table WA-4, shall be tested for all applicable parameters listed in Table WA-3. Records of all tests required in this section and in section 2.d.i.(A) above shall be retained in the operating record for a period of at least three years.
 - (C) Any volume of waste which does not meet the specifications of Table WA-3 may not be stored or recycled at the facility; it must be sent off-site to a permitted hazardous waste facility within 90 days of generation.
- ii. Hazardous wastes generated on-site, other than waste surface finishing chemicals, which are to be stored on-site pending off-site disposal:
 - (A) Using an appropriate combination of techniques as outlined in Section 2.a.i.-iii. above, the Permittee shall characterize each shipment of the waste adequately to ensure proper storage and disposal.
 - (B) Documentation of this characterization process shall be retained in the operating record for a period of at least three years.
- iii. Only the on-site-generated waste streams indicated in Table WA-3 shall be accepted for storage or recycling by the permittee. Furthermore, only on-site wastes which lie within the allowable concentration ranges as indicated in Table WA-3 shall be accepted for storage or recycling by the permittee.

Table WA-2

**WASTE STREAM DESIGNATIONS AND ANALYTICAL PARAMETERS
FOR 245 FREIGHT STREET FACILITY WASTES**

EPA Hazardous Waste Number	Material Description	Waste Constituent	Allowable Conc. Range	Hazard	Handling Method
D002	Palladium Solution	Water ¹ Palladium pH	Balance 0-100,000 ppm ≤2.0	Toxic Corrosive	S01
D001/F003/F005	Waste Mixed Solvents (Non-Chlorinated)	Flash Point pH Water ¹ Xylene Ethyl Acetate Ethyl Benzene Ethyl Ether Methyl Isobutyl Ketone n-Butyl Alcohol Cyclohexanone Methanol Toluene Methyl Ethyl Ketone Isobutanol	≥50°F 1-8 Balance This waste stream will be a mixture of these constituents, therefore, allowable concentration ranges do not apply.	Ignitable Toxic Corrosive	S01
D001/F002	Waste Mixed Solvents (Chlorinated)	Water Flash Point pH Tetrachloroethylene Trichloroethylene 1,1,1-Trichloroethane Chlorobenzene 1,1,2-Trichloro-1,2,2, Trifluoroethane	Balance ≥100°F 4-10 This waste stream will be a mixture of these constituents, therefore, allowable concentration ranges do not apply..	Ignitable Toxic Corrosive	S01

¹ These constituents which are the major components of the raw products will not be analyzed for when waste shipments are received. They have been provided solely for the purpose to determine compatibility with other waste streams (see Section 5.5).

Table WA-3

**WASTE STREAM DESIGNATIONS AND ANALYTICAL PARAMETERS
FOR ON-SITE-GENERATED WASTES**

EPA Hazardous Waste Number	Material Description	Waste Constituent	Allowable Conc. Range	Hazard	Handling Method
D002/D008	Copper Etchant	Water ¹ Ammonia ¹ Chloride ¹ Copper Zinc Tin Lead Iron Nickel pH ¹	Balance 40-200 g/l 100-250 g/l 0-200,000 ppm 0-2,000 ppm 0-200 ppm 5-200 ppm 0-30 ppm 0-20 ppm 8-10	Corrosive Toxic	S01
D002	Solder Conditioner	Water ¹ Ammonium Chloride ¹ Hydrochloric Acid ¹ Fluoride Copper Iron pH	500-850 g/l 60-200 g/l 80-175 g/l 0-20 ppm 0-3,000 ppm 0-500 ppm ≤2.0	Corrosive Toxic	S01
D002/D008	Solder Stripper	Water ¹ Hydrogen Peroxide ¹ Ammonium Bifluoride ¹ Chloride Copper Tin Lead (soluble) Iron Nickel pH ¹	Balance 0-190 g/l 90-300 g/l 0-1,000 ppm 0-8,000 ppm 2,000-75,000 ppm 5-100 ppm 0-200 ppm 0-20 ppm 3.5 to 6.0	Toxic Toxic	S01 S01
D002	Acid Zinc Solution	Water ¹ Zinc pH	Balance 0-50,000 ppm ≤2.0	Toxic Corrosive	S01
D002	Acid Copper Solution	Water ¹ Copper pH	Balance 0-100,000 ppm ≤2.0	Toxic Corrosive	S01
U154	Methanol	Water ¹ Methanol	Balance 500,000-1,000,000 ppm	Ignitable	S01
U002	Acetone	Water ¹ Acetone	Balance 500,000-1,000,000 ppm	Ignitable	S01
D002/F003/F005	Waste Mixed Solvents (Non-Chlorinated)	Water ¹ Flash Point pH	Balance ≥50°F 1-8	Ignitable Toxic Corrosive	S01

EPA Hazardous Waste Number	Material Description	Waste Constituent	Allowable Conc. Range	Hazard	Handling Method
D002/F003/F005 (cont.)	Waste Mixed Solvents (Non-Chlorinated)	Xylene Ethyl Acetate Ethyl Benzene Ethyl Ether Methyl Isobutyl Ketone n-Butyl Alcohol Cyclohexanone Methanol Toluene Methyl Ethyl Ketone Isobutanol	This waste stream will be a mixture of these constituents, therefore, allowable concentration ranges do not apply.	Ignitable Toxic Corrosive	S01
D002/F002	Waste Mixed Solvents (Chlorinated)	Water ¹ Flash Point pH Tetrachloroethylene Trichloroethylene 1,1,1-Trichloroethane Chlorobenzene 1,1,2-Trichloro-1,2,2, Trifluoroethane	Balance ≥100°F 1-8 This waste stream will be a mixture of these constituents, therefore, allowable concentration ranges do not apply.	Ignitable Toxic Corrosive	S01
F006	Metal Hydroxide/Sulfide Sludge	Copper Iron Aluminum Chromium Zinc Tin Lead Sulfur Fluoride Water	10-30% .5-10% .1-8% 0-8% .1-2% 0-1% 0-2% 4-12% 0-1% 0-55%	Toxic	S01
D002	Waste Nickel Solution	Water ¹ Nickel pH	Balance 0-100 g/l ≤2.0	Toxic Corrosive	S01
D008	Lead Fluoride Sludge	Lead Tin pH	5-1,000 g/l 0-500 g/l 5-12	Toxic	S01
D001	Vacuum Pump Oil/Inks	Flash Point	≤140°F	Ignitable	S01

¹ These constituents which are the major components of the raw products will not be analyzed for when waste shipments are received. They have been provided solely for the purpose to determine compatibility with other waste streams

3.) Spot Testing.

- a.) In addition to initial waste characterization, spot testing will be employed as a secondary check of waste identity for the following waste streams:
 - i. shipments of off-site customer's used surface finishing chemicals (i.e. the waste streams listed in Table WA-1), and
 - ii. used surface finishing chemicals generated on-site.
- b.) Upon delivery from off-site or generation on-site of a used surface finishing chemical, a representative sample from each container or tank truck compartment shall be taken and spot tested. The spot tests to be performed on each used surface finishing chemical and their allowable specifications are listed in Table WA-4.
 - i. Each container or tank truck compartment of off-site used surface finishing chemical which does not meet the specifications indicated in Table WA-4 shall either be rejected and returned to the generating facility or analyzed for the parameters listed under Table WA-1. If the results of these secondary analyses indicate that any of the constituents are outside the allowable ranges listed in Table WA-1, the waste load must be rejected and returned to the customer or off-site MacDermid facility. If these results are within the allowable range of contaminants listed in Table WA-1, MacDermid, Inc. may determine, on a case-by-case basis, to accept or reject the waste. The procedures of this paragraph are summarized in the form of a flow chart, which has been included in this attachment as Figure WA-1.
 - ii. Each container of on-site used surface finishing chemical which does not meet the specifications indicated in Table WA-4 shall be tested for the appropriate Table WA-3 parameters. If the waste does not conform with the specifications in Table WA-3, it shall not be accepted for storage, but shall be shipped off-site to a permitted hazardous waste facility within 90 days of generation.
 - iii. Under no circumstances shall any volume of used surface finishing chemical which does not meet the specifications of Table WA-1 or Table WA-3 be accepted for storage or recycling by MacDermid, Inc.
- c.) All containers of used surface finishing chemicals arriving from off-site via MacDermid vehicles shall be spot tested in accordance with section 3.b.i. above within 48 hours of receipt. Any containers

Table WA-4

SPOT TESTS FOR USED SURFACE FINISHING CHEMICALS

MacDermid Waste Stream/Stream Numbers	Parameter	Allowable Specifications
Solder Conditioner	Appearance	Yellow to water white homogeneous liquid at 75°F
	pH	<3.0
	Ammonia (Liberated)	Positive
Solder Stripper	Appearance	Light brown or blue to blue- green (not green) homogeneous liquid at 75°F
	pH	3.5 to 6.0
	Ammonia (Free)	Negative
	Ammonia (Liberated)	Positive
Copper Etchant	Appearance	Deep blue homogeneous liquid at 75°F
	Specific Gravity	1.13 minimum at 75°F
	Ammonia (Free)	Positive

which fail the spot tests shall either be returned or further tested and subsequently accepted or rejected in accordance with section 3.b.i., within 72 hours of receipt.

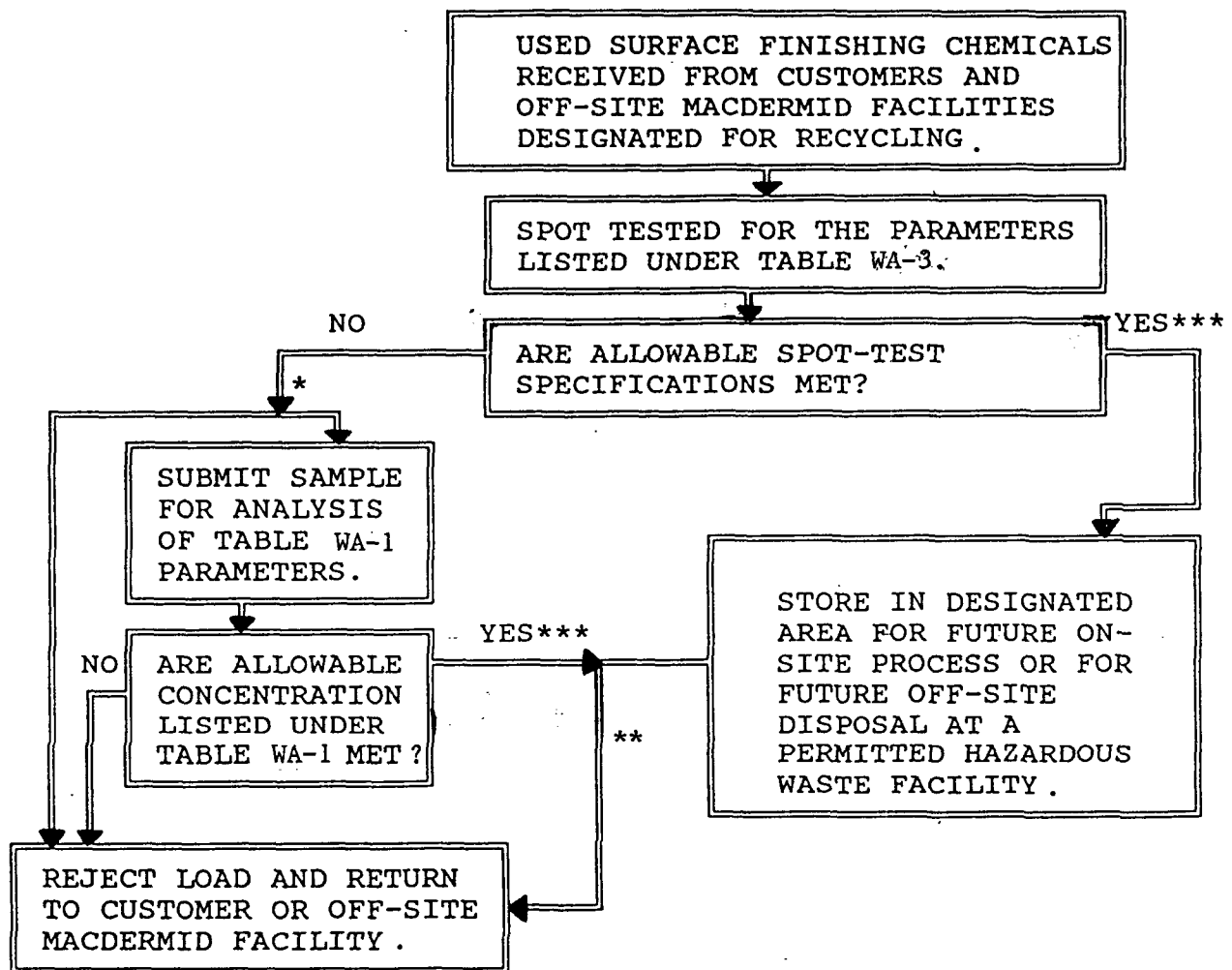
- d.) All tank truck shipments of used surface finishing chemicals and all containers of used surface finishing chemicals arriving from off-site via non-MacDermid carriers shall be spot tested in accordance with section 3.b.i. above, within 6 hours of receipt. Any wastes which fail the spot tests shall within this time period be returned or further tested and subsequently accepted or rejected in accordance with section 3.b.i.

4.) Characterization of Spills.

- b.) Spill residues from known sources shall be analyzed for the appropriate parameters in Table WA-1, WA-2, or WA-3. The results from these analyses shall be used to characterize the spill residues, and to reconfirm the original characterization, storage, and/or disposal.
- c.) Spill residues from unknown sources shall be analyzed for all the parameters listed in Section 5.a. of this attachment. If the results of this characterization meet the specifications of one of the waste streams listed in Tables WA-1, WA-2, and WA-3, the waste may be placed into storage; if the waste does not fall within any of the listed specifications, the waste may not be placed into storage, and must be shipped off-site to a permitted hazardous waste facility within 90 days.

Figure WA-1

FLOW DIAGRAM FOR ACCEPTING OR REJECTING USED SURFACE FINISHING CHEMICALS
RECEIVED FROM CUSTOMERS AND OFF-SITE MACDERMID FACILITIES



* CASE-BY-CASE DECISION TO BE MADE BY MACDERMID, INC.

** In some instances, waste streams which fall within the allowable concentration may be rejected, case-by-case decision to be made by MacDermid, Inc.

*** Under no circumstances will MacDermid accept for treatment or storage wastes which are excluded by the permit.

5.) Waste Analysis and Sampling Procedures.

a.) The following analytical methods and other appropriate methods shall be used to conduct the analyses specified in Sections 1, 2, and 4 of this attachment:

i. Analyses specified in SW-846, Test Methods for Evaluating Solid Waste (November, 1986, or most recent revision):

<u>Parameter</u>	<u>Analytical Method</u> <u>(as specified in SW-846)</u>
Aluminum	7020
Cadmium	7130
Chloride	9251
Chromium	7190
Copper	7210
Iron	7380
Lead	7420
Nickel	7520
Palladium	3010/6010
Tin	7870
Zinc	7950
Acetone	8240
Chlorobenzene	8010
Ethyl Benzene	8020
Ethyl Ether	8015
Isobutanol	8015
Methyl Ethyl Ketone	8015
Methyl Isobutyl Ketone	8015
Methylene Chloride	8010
N-Butyl Alcohol	8015
Tetrachloroethylene	8010
Toluene	8020
1,1,1-Trichloroethane	8010
Trichloroethylene	8010
1,1,2-Trichloro- 1,2,2-Trifluoroethane	8010
Xylene	8020
EPA Method 8010 Chlorinated Hydrocarbons	8010
pH	9049
Flash Point	1010

- ii. The following additional analytical methods not specified in SW-846:

<u>Parameter</u>	<u>Method and Source of Method</u>
Fluoride	Method 413, <u>Standard Methods for the Examination of Water and Wastewater</u> , 1985 (or most recent update), American Water Works Association.

- b.) The spot tests required by Section 3 of this Attachment shall be conducted as specified in Appendix 2 of this Attachment.
- c.) All samples shall be collected and preserved in accordance with the procedures described below.
- i. Samples shall be collected using the following sampling devices:

<u>Waste Type</u>	<u>Sampling Method</u>
Free-flowing Liquids (Drums and storage totes)	Coliwasa
Free-flowing Liquids (Truck tankers)	Weighted Bottle
Sludges (Roll-off Dumpsters)	Trier
Sludges (Drums and Storage Totes)	Glass or Metal Sampling Tube

Coliwasa, trier, and tube samplers shall be selected with lengths capable of obtaining representative samples of wastes throughout the entire depth of the container or tanker. The above sampling methods shall be performed as described in SW-846, Test Methods for Evaluating Solid Waste, November, 1986 (or most recent version).

- ii. With tank truck shipments of hazardous waste, each compartment of the tank truck shall be sampled whenever:
- (A) compartments contain different waste streams; or,
- (B) compartments contain the same waste streams, but were collected from different facilities.

- iii. Any samples which will not be immediately analyzed must be containerized and preserved as described in Table WA-5.
- d.) The permittee shall maintain a laboratory analysis quality assurance/quality control plan for the on-site analysis of hazardous wastes. The permittee shall utilize only Connecticut Health Department certified laboratories for all samples not analyzed on-site.
- e.) The permittee shall retain all records of analysis required by this Waste Analysis Plan for a period of at least three years.

Table WA-5

SAMPLE COLLECTION AND SAMPLE PRESERVATION REQUIREMENTS

<u>Parameter</u>	<u>Container</u>	<u>Preservation</u>
Metals	Plastic or Glass	HNO ₃ to pH <2
pH	Plastic or Glass	Cool to 4°C
Flash Point	Plastic or Glass	Cool to 4°C
Volatile Organic Compounds	Glass w/Teflon Seal	Cool to 4°C Sodium Thiosulfate
Chloride	Plastic or Glass	Cool to 4°C
Fluoride	Plastic	None Required
Ammonia	Plastic or Glass	H ₂ SO ₄ to pH <2 Cool to 4°C
Sulfide	Plastic or Glass	Zinc Acetate Cool to 4°C

6.) Waste Compatibility.

- a.) Using, at a minimum, the procedures outlined in 40 CFR 264 Appendix V, and the procedures specified in Section 6.d. below, the permittee shall determine the compatibility of each waste with each other waste or other material with which it may be stored. No waste may at any time:
 - i. be stored in the same container or tank with an incompatible waste or raw product;
 - ii. be stored in the same storage area with an incompatible waste or raw product; or,
 - iii. be stored in a container with which it is incompatible.
- b.) No waste or raw product may at any time be stored in a permitted storage area which does not have a sealant which has been demonstrated as being capable of withstanding degradation by the waste or raw product.
- c.) A waste is considered incompatible with another waste or other material, if, upon mixing or contact, a reaction may occur which:
 - i. generates excessive heat or pressure, fire or explosion, or violent reactions;
 - ii. produces toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
 - iii. produces flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;
 - iv. damages the structural integrity of its container, containment structure, or any other structure or equipment required by this permit; or
 - v. through other like means, threatens human health or the environment.
- d.) The permittee shall assess incompatibility of wastes and other materials as follows:
 - i. For each constituent reasonably expected of being present in a waste stream, assign the waste stream a reactivity group number in accordance with the reactivity groups listed in Table WA-6.

- ii. Using Figure WA-2, compare all possible reactivity groups of a waste stream with the reactivity groups of the other materials with which it may be stored or otherwise come in contact during storage.
 - iii. Any two wastes or materials which yield reactivity group pairs which have symbols in Figure WA-2 indicating an incompatible reaction, shall be considered incompatible.
 - iv. For wastes or raw materials which Figure WA-2 indicates a potential incompatibility problem, laboratory tests may be performed to further assess the actual incompatibility of the materials. A small (i.e. 5 ml) quantity of each material should be mixed first to safely determine if a highly vigorous or otherwise potentially hazardous reaction occurs. If the observed reaction is not highly vigorous, a larger quantity (i.e. at least 500 ml) should be mixed and the reaction observed. If the actual mixing of the larger quantity of each of the materials does not result in an incompatible reaction as defined in Section 6.c. above, the materials shall be considered to have been demonstrated as being compatible. If a significant incompatibility reaction is observed in either of the tests, however, the materials shall be considered incompatible. Laboratory results and observations confirming any findings shall be retained in the operating record for any waste or other materials tested in this manner.
 - v. The compatibility of wastes with containers shall be ensured by utilizing only containers indicated as acceptable for each waste in Sections 172 and 173 of Title 49 of the Codes of Federal Regulations (49 CFR 172 & 173). Examples of compatible containers for each waste stream are listed in Table WA-7.
- e.) In order to allow for proper storage with respect to compatibility, the wastes handled at MacDermid, Inc., shall be stored and segregated in accordance with Table WA-7.

Table WA-6

REACTIVITY GROUP NUMBERS*

<u>Reactivity Group Number</u>	<u>Group Name -</u>
1	Acids, Mineral, Non-oxidizing
2	Acids, Mineral, Oxidizing
3	Acids, Organic
4	Alcohols and Glycols
5	Aldehydes
6	Amides
7	Amines, Aliphatic and Aromatic
8	Azo Compounds, Diazo Compounds, and Hydrazines
9	Carbamates
10	Caustics
11	Cyanides
12	Dithiocarbamates
13	Esters
14	Ethers
15	Fluorides, Inorganic
16	Hydrocarbons, Aromatic
17	Halogenated Organics
18	Isocyanates
19	Ketones
20	Mercaptans and Other Organic Sulfides
21	Metals, Alkali and Alkaline Earth, Elemental and Alloys
22	Metals Other Elemental and Alloys in the Form of Powders, Vapors or Sponges
23	Metals, Other Elemental, and Alloy, as Sheets, Rods, Moldings, Drops, etc
24	Metals and Metal Compounds, Toxic
25	Nitrides
26	Nitriles
27	Nitro Compounds
28	Hydrocarbon, Aliphatic, Unsaturated
29	Hydrocarbon, Aliphatic, Saturated
30	Peroxides and Hydroperoxides, Organic
31	Phenols and Creosols
32	Organophosphates, Phosphothioates and Phosphodithioates
33	Sulfides, Inorganic
34	Epoxides
101	Combustible and Flammable Materials, Miscellaneous
102	Explosives
103	Polymerizable Compounds
104	Oxidizing Agents, Strong
105	Reducing Agents, Strong
106	Water and Mixtures Containing Water
107	Water Reactive Substances

* As further defined in the EPA publication, A Method for Determining the Compatibility of Hazardous Wastes, EPA-600/2-80-076, April, 1980.

Figure WA-2
COMPATIBILITY CHART*

[illegible][illegible]

REACTIVE!

REACTIVE!

REACTIVE!

REACTIVE!

Some of the
Hazard Class
Designations may
change

Table WA-7

ALLOWABLE WASTE STORAGE LOCATIONS,
CONTAINER TYPES, AND
HAZARD CLASSES

<u>Storage Area</u>	<u>Waste Stream</u>	<u>Container Type*</u>	<u>Hazard Class</u>
Main Container Storage Area	Copper Etchant	A,B	Corrosive
	Solder Conditioner	A	Corrosive
	Solder Stripper	A	Corrosive
	Acid Zinc Soln.	A	Corrosive
	Acid Copper Soln.	A	Corrosive
	Palladium Soln.	A	Corrosive
	Waste Nickel Soln.	A	Corrosive
	Lead Fluoride Sludge	A	ORM-B
Combustible Storage Area	Vacuum Pump Oil/ Inks	A	Combustible Liquid
	Waste Mixed Solvents, Non- Chlorinated	A,C,D	Flammable/ Corrosive/ Combustible Liquid
	Waste Mixed Solvents, Chlorinated	A,C,D	Flammable/ Corrosive/ Combustible Liquid

Table WA-7 (Continued)

<u>Storage Area</u>	<u>Waste Stream</u>	<u>Container Type*</u>	<u>Hazard Class</u>
Flammable Material Storage Area	Waste Mixed Solvents, Non- Chlorinated	A,C,D	Flammable/ Corrosive/ Combustible Liquid
	Waste Mixed Solvents, Chlorinated	A,C,D	Flammable/ Corrosive/ Combustible Liquid
	Acetone	C	Flammable/ Corrosive/ Combustible Liquid
	Methanol	C	Flammable/ Corrosive/ Combustible Liquid
Metal Hydroxide/ Sulfide Sludge Storage Area	Metal Hydroxide/ Sulfide Sludge	E	ORM-E
Waste Storage Tanks	Copper Etchant	N.A.	Corrosive

*Container Codes:

- A 55-gallon drum, DOT specification 34.
- B 330-gallon polyethylene storage tote, DOT specification E-8225 and E-9052.
- C 5-gallon polyethylene container, DOT specification 34.
- D 55-gallon steel drum, DOT specification 17E.
- E 26-yd³ steel roll-off container.

Appendix 1

SAMPLE WASTE CHARACTERIZATION REPORT FORMS

WASTE ANALYSIS FORM
ON-SITE GENERATED WASTES

SECTION
264.13

WASTE _____

TSDF _____ REF: NO: _____

SOURCE: _____

CHARACTERISTICS

EQUIPMENT USED TO ANALYZE

Waste Nos: _____

Color: _____

pH Meter: _____

Odor: _____

SP.GR: (Hydrometer): _____

pH: _____

Fl. Pt. (Tag CC ASTM D56-64, 1968) _____

Sp. Gr.: _____

Gas Chromatography: _____

Fl. Pt.: _____

A.A. Spectrophotometry: _____

Layering: _____

Wet Analysis (Titration): _____

Frequency of Sampling: _____

Method of Collection: _____

Land-Ban: Yes ___ No ___

METALS & CONC: _____

COMPOSITION: _____

RATIONALE: _____

GENERATED WASTE - SPOT TEST

WASTE ID NO: _____
(3 digits)

DEPARTMENT: _____

DEPT. ACCT. NUMBER WASTE TO BE
CHARGED TO: _____

WASTE NAME: _____

TYPE SAMPLE: GRAB
COMPOSITE
RANDOM

.....

CHARACTERISTICS

RESULTS

SPECIFICATIONS

Odor

Color

pH

Sp. Gravity

Flash Point

Metals Run if Applicable

Tin

Lead

Iron

Copper

Zinc

Cadmium

Other _____

Solvents:

I certify this waste is within specification of the written waste analysis plan for on-site generated wastes per waste ID number.

(Signature)

Date: _____

Appendix 2

SPOT TESTING PROCEDURES

SPOT TEST PROCEDURES FOR USED SURFACE FINISHING CHEMICALS

MacDermid, Inc.
526 Huntingdon Avenue
Waterbury, Connecticut

Chemical

Solder Stripper

Spot Test Format

Equipment:

1. Standard laboratory equipment
2. pH meter

Reagents:

1. Red litmus paper
2. Sodium hydroxide (NaOH) crystals
3. pH paper

Procedures:

1. Appearance

Obtain a representative sample of material to be tested. Decant approximately 150 ml. sample into a 250 ml. beaker. Examine solution for color, homogeneity and extraneous material.

2. pH

Using pH paper, obtain and record a pH value for the sample.

3. Free Ammonia

Wave a moistened piece of red litmus paper over incoming drum. If paper remains red, test is negative.

4. Liberated Ammonia

- a. Add 2.0 g NaOH crystals to plastic beaker containing 20 ml. of spent solution. Suspend a moist piece of litmus and cover with a watch glass.
- b. Wait a minute. If the paper turns blue, test is positive.

SPOT TEST PROCEDURES FOR USED SURFACE FINISHING CHEMICALS

MacDermid, Inc.
526 Huntingdon Avenue
Waterbury, Connecticut

Chemical

Solder Conditioner

Spot Test Format

Equipment:

1. Standard laboratory equipment
2. pH meter
3. Water bath
4. Ret litmus paper

Reagents:

1. NaOH crystals

Procedures:

1. Appearance

Obtain a representative sample of material to be tested. Decant approximately 150 ml. sample into a 250 ml. beaker. Examine solution for color, homogeneity and extraneous material.

2. pH

Using a pH meter standardized with pH 4 buffer, obtain and record a pH value for the sample.

3. Liberated Ammonia

- a. Add 2.0 g NaOH crystals to plastic beaker containing 20 ml. of spent solution. Suspend a moist piece of litmus and cover with a watch glass.
- b. Wait a minute. If the paper turns blue, test is positive.

1111-1-100-1-1

SPOT TEST PROCEDURES FOR USED SURFACE FINISHING CHEMICALS

MacDermid, Inc.
526 Huntingdon Avenue
Waterbury, Connecticut

Chemical

Copper Etchant

Spot Test Format

Equipment:

1. Standard laboratory equipment

Reagents:

1. Red litmus paper

Procedures:

1. Appearance

Obtain a representative sample of material to be tested. Decant approximately 150 ml. sample into a 250 ml. beaker. Examine solution for color, turbidity and extraneous material.

2. Specific Gravity

Place digital density meter probe in drum and record specific gravity measurement once the reading has stabilized.

3. Free Ammonia

Wave a moistened piece of red litmus paper over incoming drum. If paper turns blue, the drum has tested positive for ammonia.

ATTACHMENT B

CONTINGENCY PLAN

HAZARDOUS/CT-REGULATED WASTE CONTINGENCY PLAN

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

10.0 HAZARDOUS/CT-REGULATED WASTE CONTINGENCY PLAN

10.1 Purpose

In accordance with Title 40 of the Code of Federal Regulations 264 Subpart D and the Standards for Commercial Connecticut Regulated Waste Facilities, the following plan will be used in the event of an emergency.

The purpose of this plan is three-fold:

- 1) To act as a guide during actual emergency situations;
- 2) To minimize hazards to human health and the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous and industrial wastes stored on-site to the air or soils; and
- 3) To familiarize local emergency response personnel (i.e. police, fire, and rescue departments, hospital and governmental personnel) with the types of material handled and internal emergency response procedures.

The provisions of this plan will be carried out immediately whenever there is a fire, explosion, or release of hazardous waste which could threaten human health or the environment. The provisions of this plan also applies to the CT-regulated wastes storage and recycling operations.

In addition, this plan is intended to describe the actions facility personnel must take to minimize hazards to human health or the environment in the event of fires, explosions, or any unplanned sudden or non-sudden release of hazardous wastes.

A general description of the facility, including the location of hazardous waste storage areas and emergency equipment and communications, are shown on Figure 10.1.

Provided in the following sections of this plan are:

- 10.2 Initial Notifications
- 10.3 Implementation of the Contingency Plan
- 10.4 Emergency Procedures
- 10.5 Control Procedures
- 10.6 Emergency Equipment/Containment Structures
- 10.7 Evacuation Plan
- 10.8 Reporting of Emergency Incidents
- 10.9 Contingency Plan Review/Location
- 10.10 Arrangements with Local Authorities

A. Introduction

MacDermid, Inc. is located on two parcels of property north and south of Huntingdon Avenue in the Fairmont section of Waterbury, Connecticut. The southern parcel is approximately 11 acres in area on which one building houses both manufacturing and laboratory facilities. The northern parcel is approximately 42 acres in size and is mostly undeveloped except for MacDermid's vacant office building located on the eastern portion.

**US EPA New England
RCRA Document Management System
Image Target Sheet**

RDMS Document ID # 100859

Facility Name: MACDERMID INC

Facility ID#: CTD001164599

Phase Classification: R-1B

Purpose of Target Sheet:

☒ **Oversized (in Site File)** ☐ **Oversized (in Map Drawer)**

☐ **Page(s) Missing (Please Specify Below)**

☐ **Privileged** ☐ **Other (Provide
Purpose Below)**

Description of Oversized Material, if applicable:

FIGURE 10.1: EMERGENCY EQUIPMENT LOCATIONS

☒ **Map** ☐ **Photograph** ☐ **Other (Specify Below)**

*** Please Contact the EPA New England RCRA Records Center to View This Document ***

The principle business of MacDermid, Inc. is the blending or compounding of chemical materials used in metal finishing, plating on plastics, micro electronics and printed circuit industries. As an adjunct to the principle business, MacDermid reprocesses used surface finishing chemicals received from their customers and off-site MacDermid facilities for recycling. As a result of these operations, hazardous and CT-regulated wastes are generated, stored temporarily on-site and/or recycled. Ultimately all hazardous and CT-regulated wastes are removed from the site by certified waste haulers and disposed of at permitted hazardous waste disposal facilities.

The remainder of the Plan describes necessary actions and procedures to be employed in the event of an emergency at MacDermid, Inc.

Presented on Figure 10.1 is a site plan of the facility.

B. Handling Emergencies for MacDermid Incorporated

As the quantity and variety of hazardous materials increase, the likelihood of emergencies grow. Also, even relatively minor incidents, from a technical viewpoint, may seem to be major emergencies from the public's stand point. It is imperative that emergencies involving MacDermid materials be handled in a safe and organized manner so as to protect persons, property, and the environment from whatever hazards may be involved.

MacDermid's role in an emergency should be to advise and assist by providing technical information and material resources as necessary and appropriately to enable emergency personnel to reduce the hazard as much as possible.

For the safety of all concerned, it is essential that an incident be properly reported and documented, such that appropriate MacDermid personnel can be contacted as soon as possible. How to report such an emergency, how to contact appropriate MacDermid personnel, and MacDermid's responsibilities at the incident scene, are the subjects discussed in the following section of this guideline.

C. Types of Wastes Received for Recycling

The hazardous and CT-regulated wastes listed below are received from MacDermid customers or off-site MacDermid facilities for reclamation (recycling):

- Copper etchant
- Solder stripper
- Solder conditioner (stored on-site only at this time)
- Electroless Copper (stored on-site only at this time)
- N-Methyl Pyrolidone (NMP)

a. Copper Etchant:

Copper etchant is received either in bulk or in containers, and stored temporarily prior to reclamation.

Recyclable solution received in bulk is stored temporarily in the waste storage tanks, and later reclaimed on-site, or re shipped off-site for reclamation.

Recyclable solution received in containers is stored temporarily in the main container storage area, and later reclaimed on-site or reshipped off-site for reclamation.

b. Solder Stripper/Conditioner Solution/Electroless Copper

Solder stripper is received in containers, and stored temporarily prior to being reclaimed on-site. The Solder conditioner and electroless copper is sent to MacDermid, Inc., Ferndale, MI for on-site reclamation. These materials are stored in the main container storage area, and later transferred for recovery on-site or transferred to MI.

c. N-Methyl Pyrolidone (NMP)

N-Methyl Pyrolidone (NMP) is received in containers, and stored temporarily prior to being reclaimed on-site or reshipped off-site for reclamation. NMP is stored on-site in the combustible storage area.

d. Other Waste Streams

The remaining wastes generated on-site or received from MacDermid's 245 Freight Street facility are stored on-site in containers prior to being shipped off-site for final treatment/disposal at a permitted hazardous waste facility. These waste streams are primarily by-products generated from the manufacturing and development of surface finishing chemicals.

10.2 Initial Notifications

At the facility, the following personnel must be notified in case of a sudden or non-sudden release of hazardous wastes, fire or explosion. The phone number at the plant to be used by persons outside the facility (e.g. fire, police, spill contractors, etc.) is (203) 575-5700.

<u>NAME</u>	<u>HOME LOCATION</u>	<u>HOME PHONE</u>	<u>PLANT PHONE</u>
John Miele (Emergency Coordinator)	131 Stoddard Rd. Waterbury, CT	756-2702	575-5851
Bill Schweiker (Alternate)	19 Juniper Dr. Wolcott, CT	879-2837	575-5998
Bob Ardziejaskas (Alternate)	58 Delhurst Dr. Waterbury, CT	757-6953	575-5849
Frank Cruice (Alternate)	23 Atwood St. Watertown, CT	274-6576	575-7908

The emergency coordinator and/or his alternates provide 24-hour coverage for the Huntingdon Avenue facility.

Upon approval of the Part B Permit Application, all employees at the Huntingdon Avenue facility will receive copies of the Contingency Plan, and will be briefed on any changes as they arise. Within 24-hours after a spill event, MacDermid emergency personnel will meet to discuss the actions taken and recommend remedial action changes, if necessary.

In case of an imminent or actual emergency at the plant, the Emergency Coordinator or his alternate shall be contacted first. The Emergency Coordinator shall carry out the emergency plan agreed

to by local police, fire department, hospitals, contractors and state and local emergency response teams.

The flow diagrams in Sections 10.5.2, through 10.5.4 contain all the phone numbers of organizations or facilities that the Emergency Coordinator should contact, should the threat of imminent danger arise.

10.3 Implementation of the Contingency Plan [40 CFR Section 264.51]

The decision to implement the Contingency Plan depends upon whether or not an imminent or actual incident could threaten human health or the environment. This section outlines decision-making criteria which the Emergency Coordinator should use to define situations in which the Contingency Plan will be implemented.

(1) Fire and/or Explosion

- a. A fire causes the release of toxic fumes.
- b. The fire spreads and could possibly ignite materials at other locations on-site or could cause heat-induced explosions.
- c. The fire could possibly spread to off-site areas.
- d. Use of water or water and chemical fire suppressant could result in contaminated runoff.
- e. An imminent danger exists that an explosion could occur, causing a safety hazard because of flying fragments or shock waves.
- f. An imminent danger exists that an explosion could ignite other hazardous waste at the facility.
- g. An imminent danger exists that an explosion could result in release of toxic materials.
- h. An explosion has occurred.

(2) Spills or Material Release

- a. The spill could result in release of flammable liquids or vapors, thus causing a fire or gas explosion hazard.
- b. The spill could cause the release of toxic liquids or fumes.
- c. The spill can be contained on-site, but the potential exists for ground water contamination.
- d. The spill cannot be contained on-site, resulting in off-site soil contamination and/ or ground water or surface water pollution.
- e. The spill is contained but is of such magnitude that it cannot be managed by on-site equipment and/or personnel.

(3) Floods

- a. The potential exists for surface water contamination.

10.3.1 Authority of Emergency Coordinator [40 CFR Section 264.55]

The Emergency Coordinator and his alternates shall be thoroughly familiar with:

- a) all aspects of this contingency plan;
- b) all operations and activities at MacDermid, Inc.;
- c) the location and characteristics of all waste handled at MacDermid, Inc.;
- d) all records at MacDermid, Inc.; and
- e) the facility layout.

The Emergency Coordinator and his alternates shall have access to all parts of MacDermid, Inc. The Emergency Coordinator and his alternates shall have the authority to spend or use whatever is necessary to carry out this Contingency Plan. A file of MSDSs for materials handled on-site (as required by 29 CFR 1910.1200 and the SARA Title III requirements) are also available for use by the emergency coordinator.

10.4 Emergency Procedures [40 CFR Section 264.56]

Emergency procedures are the responsibility of the Emergency Coordinator or his alternate. Such procedures are specifically outlined below:

- I. If necessary, the Emergency Coordinator should activate internal facility alarms and/or communication systems to notify all facility personnel.
- II. The foreman of each department will, if necessary, evacuate all personnel within each department using pre-determined routes described in this Plan.
- III. If their help is needed, the Emergency Coordinator should notify the appropriate state and local agencies included in the emergency procedural flow diagrams.
- IV. The Emergency Coordinator must identify the character, exact source, amount, and extent of any released materials and assess possible hazards to human health or the environment.
- V. If the Emergency Coordinator determines there is a threat to human health or the environment outside the facility, he must report his findings to:
 - Local authorities, if evacuation of local areas is advised (see procedural flow diagrams);
 - Fire/Police Department: 911
Health Department (Waterbury) 574-6780
 - Connecticut Department of Environmental Protection
Emergency Response: (203) 566-3338, and 566-4633;
State Police: Bethany (203) 756-8069; and
 - National Response Center telephone number: 1-800-424-8802.

The following information must be provided to the DEP and the National Response Center when contacted:

- Name and telephone number of reporter;
- Name and address of facility;
- Time and type of incident (e.g. release, fire);
- Name and quantity of material(s) involved, to the extent known;
- The possible hazards to human health or the environment outside the facility; and
- The extent of injuries, if any.

10.5 Control Procedures

10.5.1 Emergency Procedures

The MacDermid, Inc. hazardous waste training program includes personnel training for emergency situations. Potential accidents fall under the following classifications:

- (1) Fire and/or Explosions;
- (2) Spill and/or Release; and
- (3) Potential Flood.

This section of the report outlines particular emergency control procedures. Immediately following the text of Sections 10.5.2, 10.5.3, and 10.5.4 are procedural flow diagrams for each of the emergencies listed above. The text preceding each chart provides more detailed information for handling each type of emergency. The types of hazardous wastes stored at MacDermid, Inc. are described along with their associated hazards in Table 10.1.

TABLE 10.1

WASTE IN STORAGE

Substance in Storage

Contingency Plan

Copper Etchant

Life Hazard: Ingestion is corrosive to Solution the digestive tract. Irritating and corrosive to body tissues. Excessive inhalation of vapors is irritating to the mucous membranes of the respiratory tract and can result in headache, coughing, lung congestion and difficulty in breathing. Liquid contact with eyes can result in eye damage.

Personal Protection: Use splash-proof, chemical resistant safety goggles, and where needed, a faceshield. Use rubber suit, boots, gloves, apron, or other protective clothing to prevent contact.

Storage: Store in leak-proof containers or tanks. Protect against physical damage.

Fire Fighting: Use media appropriate to surrounding fire conditions. Use cold water spray to control vapors and cool fire-exposed containers. When heated, material will emit vapors which necessitates respiratory and eye protection for fire fighters. Use protective clothing.

Solder Stripper and Conditioner Solution

Life Hazard: Irritants of the eyes, mucous membranes and skin. Vapors/mists Solution can irritate upper respiratory tract and result in coughing, burning of the throat, choking sensation and if inhaled deeply, pulmonary edema. Ingestion can cause burns and possible laryngeal spasm.

Personal Protection: Use rubber gloves or gauntlets, apron, boots, long sleeve shirt, body suit, etc. Use chemical resistant safety goggles and/or face shield for eye protection against splashing of acid.

Storage: Store in leak-proof containers or tanks. Protect against physical damage. Do not store acids with solvents.

Fire Fighting: Select extinguishing media suitable for surrounding fire. Use a water spray to cool exposed containers to prevent rupture. Nonflammable, but acid can react with many metals to produce hydrogen gas. Neutralize acid with limestone, slaked lime or soda ash, to minimize formation of hydrogen gas.

TABLE 10.1 (continued)

WASTE IN STORAGE

<u>Substance in Storage</u>	<u>Contingency Data</u>
Flammable Solvents (chlorinated and non-chlorinated)	<p><u>Life Hazard:</u> Incoordination and impaired judgement may occur at vapor exposures from 300-1,000 ppm. Dizziness, loss of consciousness and even death can occur at increasing levels of exposure. When involved in fire, emits highly toxic and irritating fumes. Eye and respiratory irritant. Extreme inhalation of vapors may cause death by paralysis of the respiratory center.</p> <p><u>Personal Protection:</u> Wear full protective clothing including safety goggles.</p> <p><u>Storage:</u> Store in a cool, dry, well ventilated location, away from any area where the fire hazard may be acute.</p> <p><u>Fire Fighting:</u> Use dry chemical foams, or carbon dioxide since water may be ineffective. But water should be used to keep fire exposed containers cool. If leak or spill has not ignited use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Water spray may be used to flush spill away from exposures.</p>
Metal Hydroxide/Sulfide Sludge	<p><u>Life Hazard:</u> Ingestion can cause intestinal disorders and even death. Metal constituents can cause dermatitis with skin contact. May emit toxic fumes during fire.</p> <p><u>Personal Protection:</u> Wear full protective clothing including goggles, apron and gloves.</p> <p><u>Storage:</u> Store in cool, dry, well-ventilated area, away from acute fire hazards. Incompatible with alkalies.</p> <p><u>Fire Fighting:</u> Use water spray to keep fire-exposed containers cool. Essentially non-flammable; if ignited, blanket fire with sand, G-1 powder or powdered talc.</p>
Electroless Copper and Conditioner	<p><u>Life Hazard:</u> Toxic by ingestion. Ingestion causes burning in the stomach and vomiting. Large doses can be fatal. Can be a skin irritant.</p> <p><u>Personal Protection:</u> Wear full protective clothing including safety goggles and gloves.</p> <p><u>Storage:</u> Store in leak proof containers or tanks. Protect against physical damage.</p>

TABLE 10.1 (continued)

WASTE IN STORAGE

<u>Substance in Storage</u>	<u>Contingency Data</u>
Electroless Copper and Conditioner (cont.)	<u>Fire Fighting:</u> Use media appropriate to surrounding fire conditions. Use a water spray to cool exposed containers. Essentially non-flammable.
NMP	<u>Life Hazard:</u> Low order of toxicity; minor irritant to skin. Ingestion may cause gastric disturbance. <u>Personal Protection:</u> Wear goggles, gloves and apron. <u>Storage:</u> Store in leak proof containers away from acute fire hazards. <u>Fire Fighting:</u> Use alcohol foam, CO ² or dry chemical. Use a water spray to cool exposed containers. Self contained breathing equipment should be used in a fire situation in enclosed areas.
Waste Acid Plating Solutions	<u>Life Hazard:</u> Ingestion is corrosive to digestive tract. Irritating and corrosive to body tissues. Excessive inhalation of vapors is irritating to the mucous membranes of the respiratory tract and can result in headache, coughing, lung congestion and difficulty in breathing. Liquid contact with eyes can result in eye damage. <u>Personal Protection:</u> Use splash-proof, chemical resistant safety goggles, and where needed, a face shield. Use rubber suit, boots, gloves, apron, or other protective clothing to prevent contact. <u>Storage:</u> Store in leak-proof containers or tanks. Protect against physical damage. <u>Fire Fighting:</u> Use media appropriate to surrounding fire conditions. Use cold water spray to control vapors and cool fire-exposed containers. When heated, material will emit vapors which necessitates respiratory and eye protection for fire fighters. Use protective clothing.
Waste Plating Solutions (non-acidic)	<u>Life Hazard:</u> Ingestion can cause intestinal disorders and even death. Metal constituents can cause dermatitis with skin contact. May emit toxic fumes during fire. <u>Personal Protection:</u> Wear full protective clothing including goggles, apron and gloves.

TABLE 10.1 (continued)

WASTE IN STORAGE

Substance in Storage

Contingency Data

Waste Plating Solutions
(non-acidic) (cont.)

Storage: Store in cool, dry, well-ventilated area, away from acute fire hazards. Incompatible with alkalies.

Fire Fighting: Use water spray to keep fire-exposed containers cool. Essentially non-flammable; if ignited, blanket fire with sand, G-1 powder or powdered talc.

10.5.2 Fire and/or Explosion

The container storage and handling areas and the tank storage area can all be easily accessed by fire fighting and other emergency vehicles and equipment.

If a fire breaks out, concentration will be placed on contacting local fire fighting officials and the orderly evacuation of the affected area(s).

The following actions will be taken in the areas affected by the fire or explosion:

- (1) Fire doors in buildings will be closed.
- (2) Hazardous work in all areas will be shut down immediately.
- (3) All material transfer operations will be shut down, as necessary and practical.
- (4) The area will be cleared of all personnel not actively involved in fighting the fire. These persons are to report to the designated rally points for accountability.
- (5) All injured persons will be removed and medical treatment will be administered by qualified personnel.

The facility receptionist will be called and advised not to accept any outside calls unless absolutely necessary so that the phone lines remain free to handle only emergency calls.

Area or plant evacuation will be necessary in case of major fire or explosion. All personnel have been trained in evacuation procedures and means of exit from their respective work areas.

Until evacuation is signaled, personnel who are not in an affected area will stay in their respective work areas. Contract personnel and visitors will be cleared from the area and instructed to report to the Production Manager's Office.

The Emergency Coordinator will be responsible for determining if personnel who are not in an affected area can stay in their respective work area. Supervisory personnel of unaffected areas will stay with their personnel and be ready to evacuate and account for the persons under their supervision.

An "all clear" signal will be given when the fire has been extinguished and the safety of personnel is no longer endangered. The Emergency Coordinator will determine when the emergency has passed and the "all clear" signal can be given. All emergency equipment used in the emergency must be cleaned and fit for use prior to resumption of plant operation in the affected areas. The following flow chart will be used in the event of a fire and/or explosion.

EMERGENCY PROCEDURE

FIRE AND/OR EXPLOSION

CONTACT EMERGENCY COORDINATOR AND/OR ALTERNATES.

- | | | | |
|-----------------------|------------------|-----------------------|----------------------|
| 1) EMERGENCY COORD. - | John Miele | PLANT PHONE: 575-5851 | HOME PHONE: 756-2702 |
| 2) 1ST ALTERNATE - | Bill Schweiker | PLANT PHONE: 575-5998 | HOME PHONE: 879-2837 |
| 3) 2ND ALTERNATE - | Bob Ardzijauskas | PLANT PHONE: 575-5849 | HOME PHONE: 757-6953 |
| 4) 3RD ALTERNATE - | Frank Cruice | PLANT PHONE: 575-7908 | HOME PHONE: 274-6576 |

BEEPER NUMBERS:

- 1) 1-800-512-0007
- 2) 1-800-512-0303
- 3) 1-800-512-3125
- 4) 1-800-512-4874

PERSONNEL
INJURED?

YES

NO

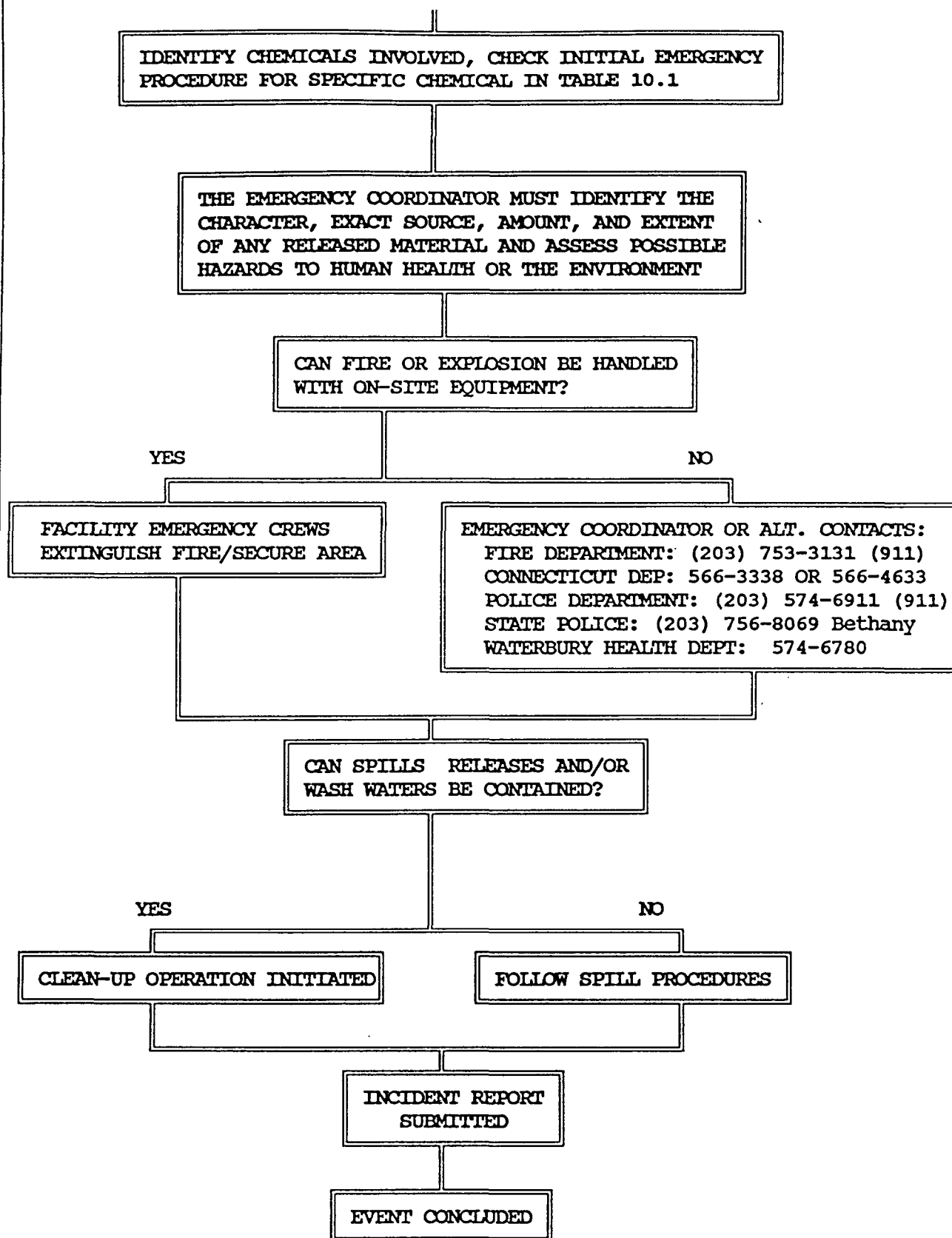
EMERGENCY COORDINATOR OR ALT. CONTACTS THE FOLLOWING:

HOSPITAL: Waterbury (573-6000)
HOSPITAL: St. Mary's (574-6000)
AMBULANCE: Champion (754-3179)
POISON CONTROL CENTER: (574-6011)

IF NECESSARY, THE EMERGENCY COORDINATOR
SHOULD ACTIVATE INTERNAL FACILITY ALARMS
AND/OR COMMUNICATION SYSTEMS TO NOTIFY
ALL PERSONNEL OF EVACUATION.

- 1) FIRE DOORS IN BUILDING WILL BE CLOSED.
- 2) HAZARDOUS WORK IN ALL AREAS WILL BE SHUT DOWN IMMEDIATELY.
- 3) ALL FEED LINES AND ADDITIONAL EQUIPMENT WILL BE SHUT DOWN, AS NECESSARY AND PRACTICAL.
- 4) THE AREA WILL BE CLEARED OF ALL PERSONNEL NOT ACTIVELY INVOLVED IN FIGHTING THE FIRE. THESE PERSONS ARE TO REPORT TO THE DESIGNATED RALLY POINTS FOR ACCOUNTABILITY.

(CONTINUED ON NEXT PAGE)



10.5.3 Spills

In the event of a major emergency involving a chemical spill, the following general procedures will be used for rapid and safe response and control of the situation.

A. Response

Each of the group leaders has been informed of the following procedures and everyone should be familiar with them.

1. In the event of a spill of any type or quantity, the group leader is to be informed immediately, if possible.
2. The group leader will dial 7998 for the switchboard operator and tell her to page "Code Red-Huntingdon" or "Code Red-Freight Street".
3. This page will be given first priority; nothing will precede it. The group leaders, every one of them, will report to the Production Manager's office whether or not he is there.
4. People who will respond are John Miele, Bill Schweiker, Bob Ardzijauskas, Bob Newman, Dave Howe, and John Alperin. While everyone may not be needed, we will at least have established a command post and a reserve of knowledge to respond to the spill and if notification of appropriate outside agencies is required.
5. The person responsible for the spill has several objectives:

First - Contain the spill as best as possible and determine, if possible, product involved.

Second - Block the area with an empty container, fork, lift, any person in the area, etc. to prevent trucks or any vehicles from tracking the material. If spill occurs near a storm drain, emergency personnel will cover

the drain with plastic sheets and secure the sheets with speedy dry or build a berm around the drain with speedy dry.

Third - Evaluate the spill situation for the possibility of incompatibility problems.

Four - Make the notification to the group leader and accompany the group leader to the meeting point.

6. Regardless of who or what or any questions, we are all responsible for clean up if needed. This will be decided by whomever assumes control at the command post.

IN ACCORDANCE WITH STATE REGULATIONS, ALL SPILLS OR MATERIAL RELEASES MUST BE REPORTED IMMEDIATELY TO THE CONNECTICUT DEP SPILL EMERGENCY RESPONSE LINE (203) 566-3338. THIS REPORTING WILL BE DONE BY THE SAFETY/REGULATORY COMPLIANCE DEPARTMENT.

B. Guidelines

For all large spills or serious leaks, the following guidelines will be followed as closely as possible.

1. If a leak develops or a spill emanates from a waste storage area, the person discovering the discharge will leave the immediate area and contact the Emergency Coordinator. The Emergency Coordinator will obtain the following information:
 - a. Person(s) injured and seriousness of injury.
 - b. Location of the spill or leak, material involved, and source.
 - c. The approximate amount spilled, an estimate of the liquid and/or gas discharge rate, and the direction the liquid flow or gaseous cloud is moving.
 - d. Whether or not a fire is involved.

- e. Possible incompatible wastes or virgin materials in the spill area.
2. Next, the Emergency Coordinator will:
- a. Initiate evacuation of the hazard area. For small spills or leaks, isolate at least 50 ft. in all directions. For large spills, initially isolate at least 100 ft. in all directions and keep all personnel upwind of spill.
 - b. Call the fire department or ambulance for any injured persons. It may be helpful to instruct the caller in initial first aid procedures. Then call the hospital.
 - c. Call the fire department if a fire is involved that cannot be extinguished by plant personnel. Fight a small fire with dry chemicals, carbon dioxide, or foam, and large fires with water spray, fog, or foam. Keep heat-exposed containers cooled with water spray and remove them from the fire if possible. IF A HISSING SOUND COMES FROM A VENTING DEVICE OR THE DRUM BEGINS TO DISCOLOR, WITHDRAW FROM THE AREA IMMEDIATELY.
 - d. Dispatch emergency personnel to the site to take the appropriate action.
 - e. Contact the proper authorities if the spill or release is large. Contact local authorities first so that, if necessary, downstream water users and/or persons downwind of the vapor can be notified and, if necessary, evacuated. If a large spill occurs, the initial evacuation area downwind should be 0.2 mile long (1000 feet), by 0.1 mile wide (500 feet). If a tank containing waste becomes involved in a fire, isolate an area one-half mile in all directions.

3. Spill Clean-up

Chemical spills will be cleaned up as quickly as possible after the incident. The Emergency

Response Coordinator will direct all clean-up operations. All clean-ups will be conducted in accordance with all federal, state and local regulations. All clean-up personnel will be required to use the proper protective clothing and equipment during clean-up operations.

- a. Make sure all unnecessary persons are removed from the hazard area.
- b. Put on protective clothing and equipment.
- c. If flammable waste is involved, remove all ignition sources, and use spark and explosion proof equipment and clothing in containment and clean-up.
- d. If possible, try to stop the leak. Special materials will be kept on-hand for temporary repairs.
- e. Remove all surrounding materials that could be especially reactive with the materials in the waste. Determine the major components in the waste at the time of the spill.
- f. Use absorbent pads, booms, earth, sandbags, sand, and other inert materials to contain, divert and clean up a spill if it has not been contained by a dike or sump. Most spills contained within a dike or sump can be pumped back into the appropriate storage tank or drum. All clean up residues will be stored in a 17E/17H open head drum and transferred to the appropriate waste storage area, if characteristic of waste is known. Unknown waste material will be stored in the container storage area and isolated from all containers by surrounding the drum(s) with temporary dike of booms, sandbags, etc.
- g. Procedure for Organic Solvent Spills (includes halogenated solvents)
 - (1) Soak up small spills with Speedi-Dri or Vermiculite.

- (2) Wear protective equipment including, but not limited to rubber gloves, and boots, protective suits and organic vapor respirators.
- (3) Do not enter confined areas without **SELF-CONTAINED BREATHING APPARATUS**.
- (4) Spent or used absorbent will be shoveled into approved 17E/17H open-head drums and stored in the appropriate waste storage area, depending on the type of spill, for subsequent disposal per state and federal regulations.

h. Procedure for Acid Spills

- (1) All acid spills will be neutralized with bagged lime or soda ash or other appropriate material.
- (2) Same procedures as "g" above will apply, regarding protective equipment entering confined areas and spent absorbents.

i. Decontamination Procedures

Spills which occur in the main plant building will be decontaminated using an absorbent material. The absorbent material will be swept back and forth over the spilled area to absorb the waste material and then shoveled into 55 gallon drums. Since all areas within the plant building are provided with concrete floors, which are generally regarded as an impervious material, no testing will be performed to determine fitness of the spill area. Spills outside the facility will have to be reviewed on a case-by-case basis to determine the extent and degree of decontamination and certification sampling. Approval will be obtained from the Department of Environmental Protection on all clean up activities outside the facility building.

4. In the event that a spill results in soil contamination, the Emergency Coordinator will contact:

HRP Associates, Inc.
167 New Britain Avenue
Plainville, Connecticut 06062
(203) 793-6899

HRP Associates will dispatch specially trained geologists and environmental engineers to coordinate clean-up to prevent contamination from reaching ground water. The soil will be removed by a licensed hazardous waste transporter to a permitted disposal site. Soil samples will be analyzed and soil removed until all contamination is removed. In conjunction with EPA and DEP, MacDermid, Inc. will determine if ground water sampling/monitoring is required. If it is, HRP Associates will submit a sampling/monitoring plan for EPA approval. Further actions will be coordinated with EPA.

5. The following flow chart will be used in the event of a spill and/or release of hazardous material.

10.5.3.1 In Case of Serious Injury

1. Alert other persons in the area by voice.
2. Go to the nearest phone - dial 7998 to reach the MacDermid operator.
3. Tell the operator that you are reporting a serious injury and give the following information:
 - a. Your name.
 - b. As much information as you have on the nature of the injury.
 - c. The exact location of the injured person.

- d. An exact location of where our employee will meet the ambulance.
- e. An indication of whether any first aiders are on the scene.

Do not hang up unless told to do so. If for any reason the operator does not pick up, dial 9-911 and give the same information to the city dispatcher.

At the same time this emergency call is being made:

- 4. At least one person must stay with the injured employee. If the injury is from chemical exposure to the skin or eyes, assist the injured person to an eyewash/shower and flush the affected area with water for at least 15 minutes. If the injured person is in an area where he/ she is in danger of further injury, try to remove the hazard. If this is not possible, move the injured person. If possible, the injured person should be moved only by a trained first aider.
- 5. At least one person should locate trained first aider(s) to further assist and monitor the injured person.
- 6. At least one person must go to the street at the entrance that gives the most direct access to the injured person and direct the ambulance crew to the injured person.
- 7. Notify the top manager on-site of the injury.
- 8. If the injury was due to a fire or chemical spill, follow the procedures for those emergencies also.

10.5.3.2 Follow Up

Within 24 hours after a spill event, MacDermid emergency response personnel will meet to discuss what happened and how to improve procedure, if necessary. Any changes required will be added to the Contingency Plan. All outside authorities (i.e. police, fire, etc.) will be notified of the modifications.

EMERGENCY PROCEDURE

SPILL AND/OR RELEASE OF HAZARDOUS MATERIAL

CONTACT EMERGENCY COORDINATOR AND/OR ALTERNATES.

- | | | |
|---------------------------------------|-----------------------|----------------------|
| 1) EMERGENCY COORD. - John Miele | PLANT PHONE: 575-5851 | HOME PHONE: 756-2702 |
| 2) 1ST ALTERNATIVE - Bill Schwieker | PLANT PHONE: 575-5998 | HOME PHONE: 879-2837 |
| 3) 2ND ALTERNATIVE - Bob Ardziejaskas | PLANT PHONE: 575-5849 | HOME PHONE: 757-6953 |
| 4) 3RD ALTERNATIVE - Frank Cruice | PLANT PHONE: 575-7908 | HOME PHONE: 274-6576 |

BEEPER NUMBERS:

- 1) 1-800-512-0007
- 2) 1-800-512-0303
- 3) 1-800-512-3125
- 4) 1-800-512-4874

PERSONNEL
INJURED?

YES

NO

EMERGENCY COORDINATOR OR ALT. CONTACTS THE FOLLOWING:

HOSPITAL:	WATERBURY	(573-6000)
HOSPITAL:	ST MARY'S	(574-6000)
AMBULANCE:	CHAMPION	(754-3179)
POISON CONTROL CENTER:		(574-6011)

IDENTIFY CHARACTER OF SPILLED CHEMICAL, CHECK INITIAL
EMERGENCY PROCEDURE FOR PARTICULAR CHEMICAL IN
TABLE 10.1

IS SPILL SMALL ENOUGH
TO BE HANDLED ON-SITE?

(CONTINUED ON NEXT PAGE)

YES

NO

CONTAIN SPILL,
CLEAN-UP SPILLED
MATERIAL, NOTIFY
CT DEP OF ACTIONS

EMERGENCY COORDINATOR OR ALTERNATE CONTACTS:
FIRE DEPARTMENT: (203) 753-3131 (911)
CONNECTICUT DEP: (203) 566-3338 OR 566-4633
POLICE DEPARTMENT: (203) 574-6911 (911)
STATE POLICE: (203) 756-8069 Bethany
WATERBURY HEALTH DEPT.: (203) 574-6780

HAS SPILL CON-
TAMINATED SUR-
ROUNDING SOIL

YES

NO

EMERGENCY COORDINATOR OR ALTERNATE CONTACTS THE
FOLLOWING:

HRP ASSOCIATES, INC.
167 NEW BRITAIN AVENUE
PLAINVILLE, CT 06062
(203) 827-0004

HAS SPILL REACHED
OR THREATENED
NAVIGABLE WATERS?

(CONTINUED ON NEXT PAGE)

YES

NO

EMERGENCY COORDINATOR OR ALTERNATE CONTACTS THE FOLLOWING:

U.S. EPA REGION I
RESPONSE CENTER (617) 472-3815
(24-hour emergency number)

NATIONAL RESPONSE CENTER (800) 424-8802

SPILL CONTAMINATED
MATERIAL CLEANED-
UP AND PROPERLY
DISPOSED.

SPILL INCIDENT
REPORT SUBMITTED

EVENT CONCLUDED

10.5.4 Floods

Due to the geographic location of the MacDermid Corporation facility the potential for flooding exists only if greater than a 100 year flood occurs. If such a flood occurs, the following steps should be taken:

1. Check with the National Weather Service or the Army Corps of Engineers for a projected flood crest.
2. If the crest will result in less than one foot of water in the drum area, the area will be diked with sandbags up to a level one foot over the projected level.
3. If the crest will result in more than one foot of water in the drum area, the waste will be removed to a waste disposal facility.
4. The following flow chart will be used in the event of a spill and/or release of hazardous materials.

10.6 Emergency Equipment/Containment Structures [40 CFR Section 264.52(e)]

Location of emergency equipment is shown on Figure 10.1 and briefly described on Table 10.2. All existing equipment should be periodically checked and maintained.

The hazardous waste materials stored on-site and associated fire fighting equipment and techniques, personnel safety equipment needs, and potential health hazards are described in Table 10.1.

Spills and leaks from the container storage and handling areas, tank storage areas, loading/unloading areas, containment pit, and treatment area will be contained by virtue of specially designed containment systems. All wastes managed in each storage area at

POTENTIAL FOR FLOOD

CONTACT EMERGENCY COORDINATOR AND/OR ALTERNATES.

1) EMERGENCY COORD. - John Miele	PLANT PHONE: 575-5851	HOME PHONE: 756-2702
2) 1ST ALTERNATE - Bill Schweiker	PLANT PHONE: 575-5998	HOME PHONE: 879-2837
3) 2ND ALTERNATE - Bob Ardziejaskas	PLANT PHONE: 783-2236	HOME PHONE: 757-6953
4) 3RD ALTERNATE - Frank Cruice	PLANT PHONE: 575-7908	HOME PHONE: 274-6576

BEEPER NUMBERS:

- 1) 1-800-512-0007
- 2) 1-800-512-0303
- 3) 1-800-512-3125
- 4) 1-800-512-4874

CHECK WITH THE NATIONAL WEATHER SERVICE FOR A PROJECTED FLOOD CREST.

NAT'L WEATHER SERVICE (RIVER FORECAST) (203) 240-3514

IF THE CREST WILL RESULT IN LESS THAN ONE FOOT OF WATER IN THE WASTE STORAGE AREA(S), THE AREA WILL BE DIKED WITH SANDBAGS UP TO A LEVEL OF ONE FOOT OVER THE PROJECTED LEVEL.

IF THE CREST WILL RESULT IN MORE THAN ONE FOOT OF WATER IN THE WASTE STORAGE AREA(S), THE WASTE WILL BE REMOVED TO A SECURE LOCATION.

IF THE WASTE CANNOT BE CONTAINED,
SEE THE SPILL FLOW CHART

TABLE 10.2
EMERGENCY EQUIPMENT

<u>Item (Amount on Hand)</u>	<u>Description/Capabilities</u>	<u>Location</u>
Absorbent Material (50-40 lb bags)	Clay-like material used to absorb and contain spill of liquid material.	See Figure 10.1
Fire Extinguishers (114)	Wall-mounted portable fire fighting apparatus. The following types of fire extinguishers are used: ABC Dry Chemical - for all types of fires.	See Figure 10.1
Telephone System/Paging System/Beepers (9 in hazardous waste storage areas)	Capable of internal and external communication.	See Figure 10.1
Rubber Gloves (30 pairs in spill boxes)	Rubber gloves for protection against harmful materials	Throughout Facility, including spill boxes
Goggles and Protective Glasses	Plastic eye covering used for protection from splashes and flying objects	Throughout Facility, including spill boxes
Shovels (6)	Tool having a broad blade or scoop attached to a long handle, used for spill clean up	See Figure 10.1 (in spill boxes)
Scott Air Pack (4)	NIOSH approved; self-contained breathing apparatus providing 30 minutes of portable oxygen for working in toxic environments	See Figure 10.1 (in spill boxes)
Emergency Shower (31) Eye Wash (33)	Provide flooding sprays of potable water from a height of approximately 7' to flush chemicals splashed onto body	See Figure 10.1
Respirators (4) Cartridges (12)	Disposable cartridges of fiber and charcoal filters to remove particulates and certain toxics from air before inhalation.	See Figure 10.1 (in spill boxes)

TABLE 10.2 (continued)
EMERGENCY EQUIPMENT

<u>Item</u>	<u>Description/Capabilities</u>	<u>Location</u>
First Aid Kit (5)	Wall mounted cabinet containing bandages, aspirins, other first aid equipment used for assisting injured workers	See Figure 10.1
Chemical Suits (4)	Protective clothing designed for full body protection against splashes of hazardous liquids	See Figure 10.1 (in spill boxes)
Fire Alarm System	Electronic, wall-mounted fire alarm box for signaling local alarm only.	See Figure 10.1
Emergency Sprinkler System	Heat activated system on ceilings throughout facility designed to quench facility fire	In all hazardous Waste Storage Areas
Walkie-Talkies (1)	Hand held communications devices which are battery operated	See Figure 10.1
High Level Alarms (3)	Float switches in waste storage tanks which activate an audible alarm when activated	Waste Storage Tanks
Water and Air Pumps (3)	Portable pumps which are used to remove accumulated liquid material.	See Figure 10.1

MacDermid, Inc. have been determined to be compatible, therefore, segregation of wastes and clean-up of a spill/leak/fire is not a concern.

10.6.1 Emergency Equipment Cleaning

When any of the emergency equipment shown on Table 10.2 is used in the clean-up/ mitigation of a hazardous waste release, this equipment must be cleaned and replenished (if necessary) as soon as possible. Cleaning of equipment will be in accordance with manufacturers' instructions under the direction of the Plant Manager.

All material used in the cleaning of equipment contaminated with hazardous waste and all single use or unsalvageable emergency equipment will be placed in an appropriate container, manifested and transported to a permitted hazardous waste disposal facility.

The Emergency Coordinator will ensure that after use in the implementation of this Contingency Plan that all emergency equipment and systems described in this plan are cleaned or refurbished and fit for use before resumption of facility operation.

10.7 Evacuation Plan

10.7.1 On-Site Evacuation Procedures

All emergencies require prompt and deliberate action. In the event of any major emergency, it will be necessary to follow an established set of procedures. Such established procedures will be followed as closely as possible; however, in specific emergency situations, the Emergency Coordinator may deviate from the procedures to provide a more effective plan for bringing the situation under control. The Emergency Coordinator is responsible for determining which emergency situations require plant evacuation.

MacDermid, Inc. employs an internal telephone and paging system. Specific instructions can be given over the facility's paging system. Key plant personnel can be contacted through the internal telephone and paging system. Total plant evacuation is initiated only by an Emergency Coordinator.

In the event plant evacuation is called for by the Emergency Coordinator, the following actions will be taken:

1. The signal for plant evacuation will be activated (warning followed by instructions over paging system).
2. All vehicle traffic within the plant will cease, to allow safe exit of personnel and movement of emergency equipment.
3. All personnel, visitors and contractors will immediately leave the facility area.

4. No persons shall remain or re-enter the location unless specifically authorized by the person(s) calling for evacuation. In allowing this, the person in charge assumes responsibility for those persons within the perimeter.
5. All persons will be accounted for by their respective Supervisors. Supervisors will designate certain doors as the safest exits for his/her employees and will also choose an alternate exit if the first choice is inaccessible. To assist in this endeavor, the Emergency Coordinator will use the internal telephone system to call the Supervisors to inform them of the nature of the emergency. If a supervisor is not present, all employees will exit through the designated emergency or alternate exits as posted on the emergency route map in their respective work area.
6. During exit, Supervisors should try to keep his/her group together. Exit routes and rally points for specific areas are shown on Figure 10.7.
7. No attempt to find persons not accounted for will involve endangering lives of others by re-entry into emergency areas.
8. Re-entry into the area will be made only after clearance is given by the Emergency Coordinator. At his direction, a signal or other notification will be given for re-entry into the plant.
9. In all questions of accountability, Supervisors will be held responsible for those persons reporting to them. Visitors will be the responsibility of those employees they are seeing. Contractors are the responsibility of those persons administering the individual contracts.
10. Drills will be held semi-annually to practice all of these procedures and will be treated with the same seriousness as an actual emergency.

10.7.1.1 On-Site Evacuation Routes

Evacuation routes are shown on
Figure 10.7. Employees are familiarized with
these routes and will take the most

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Facility Name: MACDERMID INC

Facility ID#: CTD001164599

Phase Classification: R-1B

Purpose of Target Sheet:

☒ **Oversized (in Site File)** ☐ **Oversized (in Map Drawer)**

☐ **Page(s) Missing (Please Specify Below)**

☐ **Privileged** ☐ **Other (Provide
Purpose Below)**

Description of Oversized Material, if applicable:

FIGURE 10.7: EVACUATION ROUTES

☒ **Map** ☐ **Photograph** ☐ **Other (Specify Below)**

*** Please Contact the EPA New England RCRA Records Center to View This Document ***

accessible route. There is no one specific route for a given employee, thus there are no specific alternate routes. Emergency escape routes are posted in all hazardous waste areas.

10.7.2 Off-Site Notification/Evacuation Procedures

To notify the neighboring properties in an emergency, MacDermid, Inc. has joined the City of Waterbury's Community Alert Network. The Community Alert Network is a telecommunicator service which, when activated by the public safety officials, will warn residents in the affected area of the dangers.

10.8 Shut-Down of Operations

PRODUCTION BUILDING

Reclaim Department:	Shut off transfer operations, valves and pumps.
Bulk Etch Storage:	Turn off valves and pumps before leaving area.
Liquid Department:	Turn off all operations involving transfer pumping or filtration and mixtures. Turn off all heaters and mixing equipment.
Macuplex Department:	Same as Liquid Dept.
Pilot Department:	Same as Liquid Dept.
Dry Mix:	Shut down blending operation. LEAVE BLOWERS ON. Shut down pump transfer operations.

Shipping/Receiving:	Pull out trucks.
Office Areas:	<u>Electrical Blackouts</u> Turn off all typewriters and copier machines.
Computer Equipment:	Turn off all computer terminals to avoid power surge.
Q.C./Lab:	Turn off all gas burners and electric heaters.

LEAVE HOOD VENTS ON.

NOTE: ELECTRICITY AND SCRUBBERS, UNLESS TOLD OTHERWISE BY PLANT MANAGER, FIRE CHIEF OR OTHER FIRE DEPARTMENT OFFICIAL, KEEP SCRUBBERS AND ELECTRICITY ON.

GEAR STREET

Office Area:	Turn off typewriter and copier machine including during electrical blackouts.
Ink Lab:	Bunsen burners, solder pot, pressure chamber (pressure cooker).
Ink Production:	Shut down any transfers; turn off equipment.
Micro Production:	Shut off pumps, transfer pumps and valves on tanks.
Pilot Lab Area:	Shut off all transfer pumps. If reactor in use - turn it to <u>cooling</u> . <u>DO NOT TURN REACTOR OFF.</u>

NOTE: ELECTRICITY AND SCRUBBERS, UNLESS TOLD OTHERWISE BY PLANT MANAGER, FIRE CHIEF OR OTHER FIRE DEPARTMENT OFFICIAL, KEEP SCRUBBERS AND ELECTRICITY ON.

GAS CONTROLS

In the event of a fire, the gas controls should be shut off, if possible, at the Production and Gear Street building by:

Yankee Gas Company

Locations: 1 Near East side of plant (near Dry Mix Area outside building)

1 by Liquid Mix Area - Main Shut-off, inside.

ELECTRICAL FEED PANELS/CONTROL CIRCUITS

Locations: Production: Far East end of plant near dry Mix inside near exit door.

Far West end of plant in bulk storage area (etch, etc.) - inside.

Gear Street: Micro Production - North wall Surfactant Library

Ink Production - In vault on East Aurora Avenue.

The locations of feed panels/control circuits have been provided for general informational purposes only.

SPRINKLER VALVE CONTROL

Maintenance: The entire plant is protected by a sprinkler system which is monitored by ADT. In the event of a fire, the sprinkler system, would come on and send an alarm to ADT who would then notify the Fire Department.

When the fire is under control, assigned personnel are to shut off the sprinkler valve(s) to minimize damage. They are to remain at the valve(s) in the event the fire should erupt again.

Job Description: The automatic sprinkler system is the plant's and Gear Street's main line of fire defense. But unless the valves controlling the flow of water to the sprinklers are open when fire strikes and remain open until the fire is controlled, sprinklers are useless. Even though a valve is locked open, the valve control man goes to the valve to make sure it is open and remains to close as soon as possible to minimize water damage.

LOCATION(S) OF VALVES:

Production: Outside - 3 outside on Huntingdon Avenue side.

- 1 - near Truck Garage
- 1 - near NE end of plant
- 1 - near Liquid Mix Area

New Warehouse: 1 - near Tank Farm
1 - near Ammonia Tank

Gear Street: 1 - outside near front door
1 - inside near Micro Dept. Entrance
1 - along E. Aurora (Outside)

SPRINKLER CONTROL VALVE MAN

DUTIES

A. Location of valves

The valve control man must know the location of every valve to which he is assigned and know the plant area which each controls.

B. Manually try valve

He must know how to operate the valve, how to try it; and know where the valve wrench and padlocks are kept which should be at the valves.

C. When the alarm sounds

The valve control man goes to the valve control line sprinklers for the fire area. He will unlock it to "try" it to make sure it is open.

D. Stand guard by the valve during the fire, keep it open and prevent anyone from shutting the valve without authorization from the Fire Chief. The valve is to be shut only by command of the Fire Chief.

E. The control valve man stands by prepared to reopen the valve for as long as the Chief considers necessary.

F. After the incident

The control valve man works in conjunction with the pipe fitter to restore normal sprinkler protection after the incident.

COMPLICATING FACTORS

1. Distance to valves.
2. Keys to locks as needed (bolt cutter).
3. Knowledge of protection system (system documented).
4. All valves covered, and back-up available if valve man is temporarily absent.

10.9 Reporting of Emergency Incidents [40 CFR Sections 264.56(i) and 264.56(j)]

After an emergency, within seven (7) days, the Emergency

Coordinator must report to the following agencies:

Connecticut Department of Environmental Protection
State Office Building
165 Capitol Avenue
Hartford, Connecticut 06106

Regional Administrator
U.S. Environmental Protection Agency
JFK Federal Building
Boston, Massachusetts 02203

The report must include:

- Name, address and telephone number of the owner/operator;
- Name, address and telephone number of the facility;
- Date, time and type of incident (e.g. fire, explosion);
- Name and quantity of material(s) involved;
- The extent of injuries, if any;
- An assessment of actual or potential hazards to human health or the environment, where applicable;
- Estimated quantity and disposition of recovered material that resulted from the incident;
- All differences between the emergency response activities actually taken and those prescribed in the contingency plan and the reasons for each such difference; and
- Proposed measures to prevent similar incidents in the future.

A copy of this report will be entered into the facility operating record.

Operations at MacDermid, Inc. shall not be resumed until MacDermid, Inc. notifies the Connecticut DEP that the facility is in compliance with 40 CFR Section 264.56(h), and the Connecticut DEP provides a written determination that operations may resume.

10.10 Contingency Plan Review/Location [40 CFR Section 264.54]

Under the following conditions, the Contingency Plan should be reviewed and revised.

- (1) The Part A or Part B Permits are revised;
- (2) The plan fails in an emergency;

- (3) The list of emergency coordinators changes;
- (4) The list of emergency equipment changes;
- (5) There is any change in the operation or maintenance of the facility; or
- (6) There occurs any other circumstance which indicates the need for a change in the contingency plan.

Whenever this plan is amended, the amended plan shall be submitted to the Connecticut DEP for approval.

New employees will be familiarized with all emergency response procedures. It is also recommended that an annual review should be made to update the Contingency Plan. The Emergency Coordinator at MacDermid, Inc. will be responsible for updating the plan as necessary, and distributing the updated plan to plant personnel, local authorities and the Connecticut DEP.

10.10.1 Location

Copies of the Contingency Plan will be kept at five (5) locations at MacDermid, Inc.

- 1) Main Office
- 2) Traffic Office
- 3) Safety/Regulatory Compliance Office (Freight Street)
- 4) Plant General Manager's Office
- 5) Outside Emergency Response Shed

10.11 Arrangements with Local Authorities [40 CFR Sections 264.52(c) and 264.53]

State and Federal regulations require arrangements be agreed to by local police and fire departments, hospitals, contractors, and State and local emergency response teams.

In fulfillment of the requirements of this part, MacDermid, Inc. has completed the following:

Familiarize the police and fire departments with:

- The layout of the facility
- Properties and hazards associated with the wastes handled at the facility
- Places where facility personnel would normally be working
- Entrances to the facility
- Evacuation routes

Agreements have been made with the Connecticut DEP Emergency Response Unit to provide support, as needed, during an actual emergency. St. Mary's and Waterbury Hospitals are familiar with the properties of wastes handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

Said departments, agencies, and emergency response personnel will be requested to provide those services described below in the event of an actual emergency.

Each of the above agencies has been contacted and sent copies of MacDermid, Inc.'s Contingency Plan. The following arrangements are in place:

The Waterbury Police Department will provide the following assistance during an emergency:

- Primary emergency authority
- Immediate response
- Emergency transport services
- Crowd control assistance
- Communications support
- Security to affected area
- Evacuation of surrounding areas, if required.

The Waterbury Fire Department will provide:

- Primary emergency authority
- Immediate response
- Primary fire fighting services
- Rescue and emergency transport services
- Communications support

Waterbury and St. Mary's Hospitals have received a copy of the Contingency Plan and will provide:

- Primary medical services
- Rescue services

ATTACHMENT C

CLOSURE PLAN

ATTACHMENT C

13.0 CLOSURE PLAN

13.1 Introduction

In accordance with RCRA regulations contained in 40 CFR Parts 264.111 through 264.115 (General Closure Requirements), Subparts I and J (Specific Facility Requirements, Section 22a-449(c)-29 of the Regulations of the Connecticut State Agencies, and Section 22a-454 of the Connecticut General Statutes, all owners and operators of hazardous waste facilities and commercial Connecticut regulated waste facilities must close their facilities in a manner that:

- o Minimizes the need for further maintenance;
- o Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure release of hazardous waste, hazardous constituents, leachate, contaminated run-off or hazardous waste decomposition products, to the ground water or surface water or to the atmosphere; and
- o Complies with the closure requirements of 40 CFR Subpart G including, but not limited to, the requirements of 40 CFR Sections 264.197, 264.228, 264.280, 264.310, 264.351, 264.381, and 264.404.

The Closure Plan must include, at a minimum:

- o A description of how and when the facility will be partially closed and ultimately closed;
- o An estimated of the maximum inventory of wastes in storage or treatment at any given time;
- o A description of the steps needed to decontaminate facility equipment, structures, etc., during closure;
- o A description of any additional activities required during partial or final closure such as ground water monitoring, leachate collection, etc; and
- o A schedule for final closure.

The procedures outlined in the following sections are to be followed for closure of the existing hazardous and CT-regulated waste storage facilities and recycling processes (see Figure 2.1) at MacDermid, Inc.'s 526 Huntingdon Avenue facility in Waterbury, Connecticut.

13.2 Closure Performance Standard

The closure performance standard set forth in this Plan requires that each storage area and recycling process be decontaminated to a level where all possible hazardous constituents have been removed to health and environmental based standards for all exposure pathways in order to achieve the goal of "clean" closure. The three exposure pathways of concern are inhalation, dermal contact, and ingestion.

It is, therefore, necessary to identify all Appendix VIII, 40 CFR 261 hazardous constituents which may be present. Due to the number of chemical compounds used to date at MacDermid, Inc., it was not possible to identify all Appendix VIII constituents¹ which have been used or managed on site. Therefore, sampling of the four greater-than-ninety day Storage areas for 40 CFR Part 264 Appendix IX constituents as described in Section 13.4.3.2 of application will be performed. Listed under Table 13.1 are the hazardous constituents identified to date and their respective health and environmental based standards. Any constituents identified in the Appendix IX analysis will be added to those shown on Table 13.1.

An appendix IX sample will not be taken in the QC Area (Waste Staging area), since this area is used only for the temporary storage of recyclable used surface finishing chemicals which are subsequently transferred to the Main Container Storage Area. Instead, this area will rely on the Appendix IX sampling of the Main Container Storage Area for additional clean closure parameters.

¹ The 40 CFR Part 264 Appendix IX constituents have been identified by the EPA (July 9, 1987 Federal Register) to make up those compounds in Appendix VII to Part 261 which can be analyzed in ground water samples plus 17 chemicals routinely monitored in the SuperFund Program.

TABLE 13.1
CLOSURE PERFORMANCE STANDARD FOR
EACH HAZARDOUS CONSTITUENT*

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CT.

Hazardous Constituent	MCL ^{1,2} (mg/L)	RSD ³ Water (mg/L)	RSD ³ Concrete (mg/kg)	RFD ⁴ Water (mg/L)	RSD Inhalation (mg/m ³)	RFD ⁴ Concrete (mg/kg)	ACGIH TLV ^{8,3} (mg/m ³)
Barium	1.0 ⁵	-	-	2.0	NA	900	NA
Cadmium	0.01 ⁵	-	-	-	NA	-	NA
Chromium, Hexavalent	0.05 ⁵	-	-	0.2	NA	90	NA
Cyanide	0.2 ⁵	-	-	0.7	NA	300	NA
Copper	1.0 ⁶	-	-	-	NA	-	NA
Lead	0.05 ⁵	-	-	-	NA	-	NA
Nickel	-	-	-	0.7	NA	300	NA
Tin	-	-	-	-	NA	-	NA
Zinc	5.0 ⁶	-	-	-	NA	-	NA
Acetone	-	-	-	-	-	-	1780
Chlorobenzene	-	-	-	1.0	-	500	350
Ethyl Benzene	-	-	-	-	-	-	435
Ethyl Ether	-	-	-	-	-	-	1200
Isobutanol	-	-	-	10.0	-	5,000	150
Methylene Chloride	0.025 ⁷	0.0047	47	2.0	.00025	1,000	175
Methyl Ethyl Ketone	1.0 ⁷	-	-	2.0	-	900	590
Methyl Isobutyl Ketone	-	-	-	-	-	-	205
Tetrachloroethylene	0.02 ⁷	0.0069	69.0	0.4	.00014	200	335
Toluene	1.0 ⁷	-	-	10.0	-	5,000	375
1,1,1-Trichloroethane	0.2 ⁷	-	-	3.0	-	2,000	1900
1,1,2 Trichloro	-	-	-	-	-	-	7600
1,1,2,2 Trifluoroethane	-	-	-	-	-	-	-
Trichloroethylene	0.005 ⁷	0.0032	32	-	.00027	-	270
Xylene	-	-	-	-	-	-	435

* Subject in all cases to replacement by DEP which most recent values.

- 1 Maximum Contaminant Level
- 2 When MCL's are not available other standards such as Connecticut Volatile Organic Action Levels will be used if available.
- 3 Risk-Specific Doses
- 4 Verified Reference Doses
- 5 U.S. EPA Drinking Water Standard
- 6 CT Drinking Water Standard - may only be used if there is no RSD or RFD for water.
- 7 CT-Volatile Organic Action Level - may only be used if there is no RSD or RFD for water.
- 8 American Conference of Governmental Industrial Hygienists' Threshold Limit Value - may only be used if there is no inhalation RSD.

The chief exposure pathway of concern has been determined to be ingestion. The inhalation and dermal exposure pathways are not expected to pose a risk to the general public. To demonstrate clean closure, however, theoretical concentration of each constituent with respect to the air pathway will be calculated and compared to the applicable TLV or other health-based standard. To minimize the threat to closure personnel, closure personnel will be equipped with the appropriate personal protection equipment as described in Section 13.4.7.

The health-based levels for the ingestion pathways are as follows:

- Maximum Containment Levels (MCL's)
- Risk Specific Doses (RSD's)
- Verified References Doses (RFD's)

The known MCL's, RSD's and RFD's for the hazardous constituents listed under Table 13.1 will be referred to as the closure performance standards and will be used to determine when clean closure has been achieved at this site.

13.3 Closure Performance Determination

The following hierarchies will be used to determine when the closure satisfies the clean closure performance standards shown on Table 13.1. These hierarchies have been developed for the different exposure routes (i.e. ingestion of leachate, or concrete) and to take into consideration background levels.

For liquid matrices (i.e. concrete leachate and tank wipe samples), the analytical results for specific constituents will be compared

to the MCL's, RSD's, RFD's and background levels depending upon availability. In the event that the background level for a specific constituent is higher than the corresponding MCL's, RSD's and RFD's, the background level will be used as the clean standard. If the background level is less than the MCL, if one is available, the MCL will be used as the clean standard. If there is not an MCL and the background level is less than the RSD, if one is available, the RSD will be used as the clean standard.

If there is not an RSD and the background level is less than the RFD, if one is available, the RFD will be used as the clean standard. If there are no relevant health-based standards, the applicable minimum detection limits for the appropriate test method will be used. The exception to this order would be in a case that an RFD were lower than a corresponding RSD. In that case, the RFD would take precedence over the RSD. In summary, the order of closure standards for liquid matrices will be as follows:

- Background
- MCL's
- RSD's
- RFD's
- Other Relevant Health-Bases Standards (as approved by CT-DEP)
- Minimum Detection Limits

For solid matrices (i.e. concrete), the analytical results for specific constituents will be compared to the RSD's, RFD's, and background levels depending upon availability. In the event that the background level for a specific constituent is higher than the corresponding RSD's and RFD's, the background level will be used as the

clean standard. If the background level is less than the RSD, if one is available, the RSD will be use as the clean standard.

If there is not an RSD and the background level is less than the RFD, if one is available, the RFD will be used as the clean standard. If there are no relevant health-based standards, the applicable minimum detection limit for the appropriate test method will be used. The exception to this order would be in a case that an RFD were lower than a corresponding RSD. In that case, the RFD would take precedence over the RSD. In summary, the order for the closure standards for solid matrices will be as follows:

- Background
- RSD's
- RFD's
- Other Relevant Health-Based Standards (as approved by CT-DEP)
- Minimum Detection Limits

In the case of the tanks used for storage and recycling (metal and FRP), only wipe samples will be collected to determine if the clean closure has been achieved. To achieve clean closure, all contaminants of concern must be below minimum detection limits. If these standards cannot be achieved, the tanks will be disposed of off-site at a permitted hazardous waste facility.

In the case of the concrete floors located in the storage areas, the certification concrete samples must meet the closure performance standard for direct ingestion by mass analysis and soil leachability by TCLP for organics and metals. The concrete mass analysis results will be compared to the hierarchy for solid matrices, while the

concrete's leachability results will be compared to the hierarchy for liquid matrices.

For the inhalation pathway, the theoretical concentration of each volatile contaminant will be calculated as follows:

- (a) determine average concentration of volatile contaminant present in each storage area (using sampling results collected for the ingestion pathway);
- (b) determine volume of concrete in each storage area;
- (c) determine the volume air space surrounding each storage area;
- (d) calculate the mass of the remaining volatile contaminant from (a) and (b) above;
- (e) calculate the theoretical concentration of each volatile contaminant from (c) and (d) above; and
- (f) compare to the applicable TLV or other health-based standards. These standards are provided under Table 13.1.

In the event, it is determined that clean closure cannot be achieved at this site, "an unexpected event", a modified plan will be submitted to U.S. EPA and CT-DEP within thirty (30) days (see Section 13.4.11).

To achieve "clean closure", all constituents tested for within each storage area must not exceed the clean standard for all pathways.

13.4 Closure Plan

The facilities employed at MacDermid's 526 Huntingdon Avenue plant for the storage and recycling of hazardous/CT-regulated wastes include the following:

- Main Container Storage Area;
- Flammable Material Storage Area;
- Combustible Storage Area;

- . Metal Hydroxide/Sulfide Sludge Storage Area;
- . Waste Storage Tanks;
- . Recycling Tanks;
- . QC Area (Waste Staging Area).

The procedures to be followed by MacDermid, Inc. to close these facilities in a manner which will minimize the need for further maintenance and protect human health and the environment are provided in the following sections.

13.4.1 Closure Plan for Container Storage Areas

EPA ID Number:	CTD 001164599
Owner/Operator:	MacDermid, Inc.
Plant Phone Number:	(203) 575-5700
Facility Address:	526 Huntingdon Avenue Waterbury, Connecticut

13.4.1.1 Facility Operation

MacDermid, Inc. employs five (5) separate areas for the storage of containers at its Huntingdon Avenue facility. The maximum storage capacity of these areas and their intended use are as follows:

<u>Storage Area</u>	<u>Maximum Capacity</u>	<u>Intended Use</u>
Main Container Storage Area	77,000 gallons (1,280 55-gallon drums 20 330-gallon totes)	Used finishing chemicals received from customers and MacDermid off-site facilities for recycling and miscellaneous liquids and semi-liquids generated on-site and received from 245 Freight Street which have been designated for off-site disposal.

Flammable Material
Storage Area

380 gallons
(16 55-gallon drums)

Flammable liquids
generated on-site
and received
from 245
Freight Street
← designated for
off-site
disposal.

Combustible Storage
Area

4290 gallons
(54 55-gallon drums
and 4 330-gallon
totes)

Used finishing
chemical generated
on-site and received
from
customers/off-site
MacDermid facilities
for recycling.

Metal Hydroxide/Sul-
fide Sludge Storage
Area

1 26-cubic yard roll-
off

Dewatered metal hy-
droxide/sulfide
sludge generated
from the on-site
industrial waste
water treatment
system.

QC Area (Waste
Staging Area)

gallons 55-
gallon drums and
330-gallon storage
totes)

Used surface
finishing chemicals
received from
customers for
recycling,
temporarily held for
spot testing.

*Some numbers
are still missing
here*

Within these areas, all containers, except
the 330 gallon storage totes and 26 cubic
yard roll-off are stored on wooden pallets
to prevent contact with any spilled/leaked
waste. To provide access for inspection,
all container rows are separated by a
minimum of 2' and a maximum of 6'9" wide
aisles.

.1.2 Waste Disposal

It has been assumed for the purpose of this
plan, that all wastes will require off-site
disposal and the storage areas are at their
maximum storage capacity. All con-

- . Metal Hydroxide/Sulfide Sludge Storage Area;
- . Waste Storage Tanks;
- . Recycling Tanks;
- . QC Area (Waste Staging Area).

The procedures to be followed by MacDermid, Inc. to close these facilities in a manner which will minimize the need for further maintenance and protect human health and the environment are provided in the following sections.

13.4.1 Closure Plan for Container Storage Areas

EPA ID Number:	CTD 001164599
Owner/Operator:	MacDermid, Inc.
Plant Phone Number:	(203) 575-5700
Facility Address:	526 Huntingdon Avenue Waterbury, Connecticut

13.4.1.1 Facility Operation

MacDermid, Inc. employs five (5) separate areas for the storage of containers at its Huntingdon Avenue facility. The maximum storage capacity of these areas and their intended use are as follows:

<u>Storage Area</u>	<u>Maximum Capacity</u>	<u>Intended Use</u>
Main Container Storage Area	77,000 gallons (1,280 55-gallon drums 20 330-gallon totes)	Used finishing chemicals received from customers and MacDermid off-site facilities for recycling and miscellaneous liquids and semi-liquids generated on-site and received from 245 Freight Street which have been designated for off-site disposal.

or a vacuum truck and disposed of off-site at a permitted hazardous waste facility.

Step 6: Steam clean the floor after Step 5 using clean water only.

Step 7: Collect five concrete samples from each storage area using the sampling procedures described under Section 13.4.3.3. Four of the five sampling locations will be determined by dividing each storage area into 20 subsections and then using a random number generator (computer) to select each sampling point. The fifth sampling location will be located in the area of suspected highest contamination (e.g. stained, corroded concrete).

Step 8: Inspect the area for cracks, gaps or other surface damage which may have allowed migration of wastes to subgrade.

Step 9: For suspect areas determined under Step 8, a core drill will be used to determine if waste constituents have migrated to the subgrade. This will be accomplished by inspecting the concrete core for stains and extent of cracks and gaps.

Step 10: From each area evaluated under Step 9, a sample will be collected from the side wall of the core hole and if necessary from the subgrade for analysis of Table 13.1 parameters as amended by the Appendix IX analysis of Step 3 above. The sampling procedures are described under Section 13.4.3.

- Step 11: Submit the samples collected under Steps 9 and 10 to a certified laboratory for analysis. Each sample will be analyzed for the parameters listed under Table 13.1 plus additional parameters detected under Step 3. The specific analytical procedures to be followed for the known hazardous constituents are listed under Table 13.4.
- Step 12: Compare the analytical results under Step 11 to the closure performance standards listed under Table 13.1, or for parameters added as a result of the appendix IX analysis, as determined from the hierarchies in Section 13.3
- Step 13: If closure performance standards cannot be achieved (an unexpected event), a modified Closure Plan will be submitted to the U.S. EPA and CT-DEP within thirty days (see Section 13.4.11).
- Step 14: All contaminated personal equipment and spill control equipment will be collected in 55 gallon drums and disposed of off-site at a permitted facility.
- Step 15: To store wastes generated from closure activities, temporary storage areas will be utilized. These areas will be located away from any floor drains, floor trenches, etc. and provided with containment berms constructed of absorbent material (sandbags, etc.).

All waste generated during the closure of the container storage areas will be manifested and shipped off-site by a licensed

waste hauler for treatment and/or disposal at a permitted hazardous waste facility. Since no testing is proposed for these waste streams (sweepings, residues, rinsewaters and discarded personal protective equipment) these wastes will be managed and handled as hazardous wastes. Rinse or cleaning water generated in the decontamination process is estimated to be 1% of the area's maximum storage capacity.

All closure work will be supervised and performed using qualified off-site personnel. Off-site personnel will be equipped with the personal equipment described under Section 13.4.7. Chemical neutralization and spill control pillows will be employed in the event of the spills resulting from the container storage area decontamination process. Strict supervision will include provisions for no open flames, hot surfaces or smoking to be present in and around the work areas.

13.4.2 Closure Plan for Waste Storage/Recycling Tanks and Storage Areas

EPA ID Number: CTD 001164599
Owner/Operator: MacDermid, Inc.
Plant Phone Number: (203) 575-5700
Facility Address: 526 Huntingdon Avenue
Waterbury, Connecticut

13.4.2.1 Facility Operation

MacDermid, Inc. employs four (4) above ground storage tanks for the storage of bulk recyclable wastes received from customers and off-site MacDermid facilities. All wastes stored in these areas are designated for recycling. The total storage capacity for these three 8,000 gallon tanks and one 5,000 gallon tank is 29,000 gallons.

These tanks are located on the west side of the Huntingdon Avenue plant.

Under MacDermid recycling operations, the following tanks are employed:

Solder Stripper Recycling Operation

- (1) 3,000 gallon FRP tanks
- (2) 1,000 gallon Electrolysis Cells
- (1) 1,500 gallon Copper Treatment Tank

Copper Etchant Recycling Operation

- (3) 8,000 gallon FRP tanks (bulk waste storage tanks)*
- (1) 5,000 gallon FRP tank (bulk storage tank)*

- (1) 5,000 gallon Stainless Steel Reactor
- (1) 3,800 gallon Stainless Steel Reactor
- (6) 3,500 gallon FRP tanks
- (2) 4,000 gallon FRP tanks
- (3) 6,300 gallon Storage tanks

NMP Recycling Operation

- (1) 500 gallon Stainless Steel tank
- (1) 20 gallon distilled water vacuum receiver
- (1) 55 gallon distilled NMP vacuum receiver

*Note: These tanks are already included under the total tank storage capacity of 29,000 gallons listed under page 13-14.

13.4.2.2 Waste Disposal

For the purpose of this plan, it has been assumed that all bulk waste will require off-site disposal and the storage tanks are at their maximum storage capacities. All bulk waste will be disposed of off-site at a permitted facility.

13.4.2.3 Closure Procedures

The procedures for closing the bulk waste storage and recycling tanks and the storage areas are as follows:

Step 1: Dispose of all left over waste stored on-site at a permitted hazardous waste facility.

- Step 2: Remove any loose dirt or dust using a dry vacuum. All dirt/dust collected in this operation will be placed in a 55 gallon drum, and disposed of off-site at a permitted hazardous waste facility.
- Step 3: Collect a concrete sample from the floor area which exhibits the greatest contamination (staining, spalling, etc.) and submit for Appendix IX analysis. Sampling and analysis procedures are provided under Section 13.4.3. Any parameter determined under this analysis will be added to Table 13.1.
- Step 4: Using a high pressure steam cleaner with an alkaline industrial cleaner (phosphate free) wash the inside of the tanks, the outside of the tanks, piping, structure supports and the floor of the storage area.
- Step 5: Steam clean the tanks (inside and outside) piping, structural supports and floor after Step 5 using clean water only.
- Step 6: Collect all cleaning water generated in Steps 4 and 5 (55 gallon drums or vacuum truck) and ship to a permitted hazardous waste facility for final treatment/disposal.
- Step 7: Collect 1 wipe sample from the inside and outside of each storage and recycling tank using the sampling procedure described under Section 13.4.3. The sampling areas will be located in the areas exhibiting the greatest contamination.

- Step 8: Submit the wipe samples to a certified laboratory for analysis. Each sample will be sampled for the parameters listed under Table 13.1 plus any additional parameters detected under Step 3. The specific analytical procedures to be followed are listed under Table 13.4.
- Step 9: Compare the analytical results under Step 8 to closure performance standards listed under Table 13.1.
- Step 10: Based on the analytical results the tank, piping, structural supports will either be disposed of off-site at a permitted hazardous waste facility (cannot meet closure performance standards) or disposed of at a used equipment supplier or scrap metal dealer (meets closure performance standards). In all cases, tanks will be removed to allow for assessment of the underlying floor.
- Step 11: The floor underneath the tanks and surrounding the tanks will be inspected for cracks, gaps or other surface damage which may have allowed migration of wastes to subgrade.
- Step 12: For suspect areas determined under Step 11, a core drill will be used to determine if waste constituents have migrated to the subgrade. This will be accomplished by inspecting the concrete core for stains and extent of cracks and gaps.

- Step 13: From each area evaluated under Step 12, a sample will be collected from the side wall of the core hole and, if necessary, from the subgrade, for analysis of Table 13.1 parameters as amended by the Appendix IX analysis in Step 3. The sampling procedures are described under Section 13.4.4.
- Step 14: From each storage/recycling area, collect five concrete samples from the storage areas' floor using the sampling procedures described under Section 13.4.3.3. Four of the five sampling locations will be determined by dividing the storage area into 20 subsections and then using a random number generator (computer) to select each sampling point. The fifth sampling location will be located in the area of suspected highest contamination (e.g. stained, corroded concrete).
- Step 15: Submit the samples collected under Steps 13 and 14 to a certified laboratory for analysis. Each sample will be analyzed for the parameters listed under Table 13.1 plus any additional parameters detected under Step 3. The specific analytical procedures to be followed for the known hazardous constituents are listed under Table 13.4.
- Step 16: Compare the analytical results under Step 15 to the closure performance standards listed under Table 13.1, or for parameters added as a result of the Appendix IX analysis, as determined from the hierarchies in Section 13.3

Step 17: If closure performance standards cannot be achieved (an unexpected event), a modified closure plan will be submitted to the U.S. EPA and CT-DEP within thirty days (see Section 13.4.11).

Step 18: All contaminated personal equipment and spill control equipment will be collected in 55 gallon drums and disposed of off-site at a permitted facility.

Step 19: To store wastes generated from closure activities, temporary storage areas will be utilized. These areas will be located away from any floor drains, floor trenches, etc. and provided with containment berms constructed of absorbent materials (sandbags, etc.).

All waste generated during the closure of the bulk waste storage tanks will be manifested and shipped off-site by a licensed waste hauler for treatment and/or disposal at a permitted hazardous waste facility. Since no testing is proposed for these waste streams (sweepings, residues, rinsewaters, and discarded personal protective equipment), these wastes will be managed and handled as hazardous wastes. Rinse or cleaning water generated in the decontamination process is estimated at

10% of the tanks maximum storage capacity.

All closure work will be supervised and performed using qualified off-site personnel. Off-site personnel will be equipped with the personal protective equipment described under Section 13.4.7. Chemical neutralization and spill control pillows will be employed in the event of the spills resulting from the container storage area decontamination process. Strict supervision will include provisions for no open flames, hot surfaces or smoking to be present in and around the work areas.

13.4.3 Methods for Sampling and Analysis

The procedures described in this section will be used to sample and analyze the various media for the following events:

- Ambient air monitoring;
- Appendix IX sampling;
- Concrete certification sampling;
- Cracks or gaps in concrete floor sampling;
- Concrete background sampling; and
- Wipe sampling.

13.4.3.1 Ambient Air Monitoring

The storage and recycling areas are expected to pose a minimal inhalation risk only during closure activities. As such, air monitoring will be conducted to protect the health of closure personnel and off-site personnel.

Air monitoring for gross organic vapors will be conducted utilizing an HNU Organic Vapor Analyzer or an equivalent. This monitoring will be conducted to determine background levels, property boundary levels, and work area levels. This instrument yields direct measurements, therefore, no laboratory analyses are necessary. These readings will be taken continuously and recorded hourly relative to background levels.

If at any time during the closure activities, levels on the photoionization unit are detected greater than 5 ppm above background levels, the area will be temporarily evacuated and the class of personal

protection used during the closure activities will be upgraded.

The metallic constituents of concern should not pose an inhalation based threat as the materials which will be handled during the closure will be wetted to control or eliminate the risk of inhaling metal bearing dusts.

13.4.3.2 Appendix IX Sampling

To determine the hazardous constituents which may be present within the storage and the recycling areas, a concrete sample of the floor will be collected and analyzed for 40 CFR 264 Appendix IX constituents. The Appendix IX samples will be collected in the following manner:

- Step 1: Inspect the floor of storage or recycling area to determine the area of greatest contamination (staining, corrosion, etc.).
- Step 2: Collect a concrete sample of at least 200 grams using a hand chisel.
- Step 3: Decontaminate sampling equipment after use as follows:
- wash with a suitable laboratory soap (alconox);
 - rinse with tap water;

- rinse with 1:4 solution of nitric acid/distilled water;
- rinse with distilled water;
- rinse with hexane; and
- air dry.

Step 4: Store concrete samples in glass jars with teflon seals and place on ice.

Step 5: Submit samples to a certified laboratory for analysis of Appendix IX constituents. All samples will be accompanied with a chain of custody (see Appendix Q).

The parameters to be analyzed, recommended analytical procedures and corresponding detection limits to be followed by the certified laboratory are included in Appendix B. The most appropriate analytical method for a particular constituent will be chosen when a choice is given in Appendix B.

13.4.3.3 Certification Sampling of Concrete Floors

The concrete floor (base) within each storage and recycling area will be sampled to determine if the closure performance standards have been met. Each area will be sampled in the following manner.

Step 1: Divide the base of each area into 20 equal sections.

Step 2: Using a random number generator select four (4) sampling sites for each area. Select 1 additional sample from the area exhibiting the greatest contamination.

Step 3: Collect at least a 200 gram concrete sample from the center of each sampling section by one of the following methods: powered jack hammer or hand chisel.

Step 4: To prevent cross contamination between sampling points, sampling equipment will be decontaminated after each sample by the following:

- wash with a suitable laboratory soap (alconox);
- rinse with tap water;
- rinse with 1:4 solution of nitric acid/distilled water;
- rinse with distilled water;
- rinse with hexane; and
- air dry.

Step 5: Store concrete samples in glass jars with teflon seals and place on ice.

Step 6: Submit samples to a certified laboratory for analysis. All samples will be accompanied with a chain of custody (see Appendix A).

The certification samples for a particular area will be analyzed for all parameters shown on Table 13.1 and any additional constituents identified by that area's Appen-

dix IX sampling event. The samples will be pretreated as discussed in Section 13.4.5.

13.4.3.4 Sampling of Cracks and Gaps in Concrete Floor

To determine if the waste constituents have migrated to the subgrade level, the floor within each storage and recycling area will be inspected for cracks, gaps or other surface damage. Each suspect area (cracks or gaps with width 1/16" or greater) will be sampled in the following manner.

Step 1: Using a 3 inch or larger diameter core drill, core down a minimum of six inches or to the next subgrade level.

Step 2: Inspect the concrete core to determine if the crack or gap extends to the subgrade level.

Step 3: Collect at least a 200 gram sample from the subgrade level if the cracks or gaps extend to the sublevel.

Step 4: To prevent cross contamination between sampling points, sampling equipment will be decontaminated after each sample by the following:

- wash with a suitable laboratory soap (alconox);
- rinse with tap water;
- rinse with 1:4 solution of nitric acid/distilled water;
- rinse with distilled water;

- o rinse with hexane; and
- o air dry.

Step 5: Store concrete samples in glass jars with teflon seals and place on ice.

Step 6: Submit samples to a certified laboratory for analysis. All samples will be accompanied with a chain of custody (see Appendix A).

The samples from a particular area will be analyzed for all parameters shown on Table 13.1 and any additional constituents identified by that area's Appendix IX sampling event. The samples will be pretreated as discussed in Section 13.4.5.

If samples taken in step 3 indicate subgrade contamination above the health based standards in Table 13.1 as amended by this Appendix IX analysis, McDermid, Inc. must notify DEP in writing and submit a modified closure plan within 30 days, per Section 13.4.11 of this Closure Plan.

13.4.3.5 Concrete Background Samples

To determine if any metal hazardous constituents are inherent characteristics of the concrete within the storage and recycling areas, background concrete samples, if available, will be collected and analyzed. Background concrete samples must be collected from an area where no manufacturing processes, waste or product storage, etc. have occurred which might have caused contamination of the sample.

If such an area cannot be located in the same construction phase of the building, background samples will not be utilized.

Background concrete samples, if available, will be sampled in the following manner:

Step 1: Inspect the surrounding area of each storage and recycling area to locate an area where no manufacturing processes waste or product storage has occurred.

Step 2: Using a core drill, core down a minimum of six inches or to the next subgrade level. Collect three samples from each background sampling location.

Step 3: Remove approximately one (1) inch of concrete from the bottom of each core using a hand chisel.

Step 4: To prevent cross contamination between sampling points, sampling equipment will be decontaminated after each sample by the following:

- wash with a suitable laboratory soap (alconox);
- rinse with tap water;
- rinse with 1:4 solution of nitric acid/distilled water;
- rinse with distilled water;
- rinse with hexane; and
- air dry.

- Step 5: Collect at least a 200 gram sample from the bottom of each core sample.
- Step 6: Store concrete samples in glass jars with teflon seals and place on ice.
- Step 7: Submit samples to a certified laboratory for analysis. All samples will be accomplished with a chain of custody (see Appendix Q).
- Step 8: Use the method described below to statistically verify background levels.

To ensure the virgin concrete and not the subgrade and/or contaminated concrete is being analyzed, the procedure described above has been developed. Concrete background samples will also be analyzed for all parameters listed under Table 13.1 and additional Appendix IX parameters (identified in that area) to verify the concrete has not been contaminated from past operations. The presence of hazardous constituents other than metallic would indicate contamination from past operations.

A statistical analysis will also be performed on the background samples to determine if the metal constituents are

representative of on-site background levels. The statistical approach discussed in Chapter 9 of the EPA Document SW-846 Test Methods for Evaluating Solid Waste for Simple Random Sampling will be followed.

13.4.3.6 Wipe Samples

To determine if the closure performance standards have been met for the storage/recycling tanks, the tanks will be sampled in the following manner:

- Step 1: Mark off one (1) area of 0.50m^2 on the inside and the outside surface of the storage and recycling tanks (0.25m^2 is for metals sampling).
- Step 2: For organic analysis, hold cotton gauze in a metal clamp (or equivalent and saturate the gauze with hexane. For metal analyses, use dilute nitric acid (1:4 nitric acid/deionized water) in place of hexane.
- Step 3: While still holding the hexane saturated gauze in the clamp, wipe half (0.25m^2) of the sampling area back and forth repeatedly in vertical direction, applying moderate pressure. Turn the gauze over and wipe back and forth in the horizontal direction.

Step 4: Place the gauze in a glass jar with a teflon seal and store in a cooler on ice.

Step 5: Repeat steps 3 and 4 with the dilute nitric acid saturated gauze.

Step 6: Submit samples to a certified laboratory with a chain of custody (see Appendix Q).

The wipe samples for a particular tank will be analyzed for all parameters shown on Table 13.1 and any additional constituents identified by that area's Appendix IX sampling event. The samples will be pre-treated as discussed in Section 13.4.5).

13.4.4 Sample Containers and Preservation

The various samples (concrete and wipe) collected under Section 13.4.3 will be placed into the appropriate container and preserved as shown on Table 13.2.

13.4.5 Analytical Procedures

The various samples will be collected and stored as described above and in previous sections. Upon delivery to the certified laboratory, the samples will be analyzed for the appropriate parameters as discussed in the preceding sections. Due to the sample matrices (solids such as concrete), and pathways of concern, some samples must be pretreated prior to analysis by

the appropriate method for a given parameter. The recommended pretreatment methods for the various samples are shown on Table 13.3. The recommended analytical methods for the identified hazardous constituents are included as Table 13.4.

TABLE 13.2

SAMPLE COLLECTION/PRESERVATION REQUIREMENTS

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

<u>Sample Type</u> <u>(sample size)</u>	<u>Parameter</u>	<u>Container</u>	<u>Preservation</u>	<u>Holding Time</u>
Concrete (200 g)	Metals	Glass	Cool to 4°C	6 months
Concrete (200 g)	Organics	Glass ¹	Cool to 4°C	7 days ²
Wipe (N/A)	Metals	Glass	Cool to 4°C	6 months
Wipe (N/A)	Organics	Glass ¹	Cool to 4°C	7 days ²

¹ With teflon seal.

² Until extraction, 40 days after extraction.

TABLE 13.3

RECOMMENDED PRETREATMENT METHODS¹

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

Recommended Pretreatment Methods

Sample	Parameter	Mass Analysis	Leachability	Description
Concrete	Metals	3050	TCLP ²	Certification Sampling
Concrete	Volatile Organics	5030	TCLP ²	Certification Sampling
Concrete	Metals	3050	TCLP ²	Background Sampling
Concrete	Volatile Organics	5030	TCLP ²	Background Sampling
Concrete	Metals	3050	TCLP ²	Appendix IX Sampling
Concrete	Volatile Organics	5030	TCLP ²	Appendix IX Sampling
Wipe	Metals	3050	N/A	Certification Sampling
Wipe	Volatile Organics	5030	N/A	Certification Sampling

¹ Test Methods for the Evaluation of Solid Waste Physical/Chemical Methods, EPA Sw-846, 3rd Edition, November, 1986, or most recent edition.

² Toxicity Characteristic Leaching Procedure, 40 CFR Part 268, Appendix I, as most recently amended.

TABLE 13.4
RECOMMENDED ANALYTICAL METHODS¹

MACDERMID, INC.
525 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

<u>Parameter</u>	<u>EPA Method²</u>
Barium	7080
Cadmium	7130/7131
Chromium	7190/7191
Copper	7210
Cyanide	9010
Lead	7420/7421
Nickel	7520
Tin	7870
Zinc	7950
Acetone	8240
Chlorobenzene	8010
Ethyl. Benzene	8020
Ethyl Ether	8240
Isobutanol	8015
Methylene Chloride	8010
Methyl Ethyl Ketone	8015
Methyl Isobutyl Ketone	8015
Tetrachloroethylene	8010
Toluene	8020
1,1,1,-Trichloroethane	8010
1,1,2-Trichloro-1,2,2 Trifluoroethane	8010
Trichloroethylene	8010
Xylene	8020

- 1 Test Methods for the Evaluation of Solid Waste Physical/Chemical Methods, EPA SW-846, 3rd Edition, November, 1986. Any additional parameters analyzed for in response to Section 13.4.1.3 of this plan shall be per SW-846, or other method approved by DEP.
- 2 When analyzing a sample, the most appropriate analytical method for a particular constituent will be chosen when a choice is listed.

13.4.6 Field Quality Assurance/Quality Control Program

To monitor the field sampling activities certain QA/QC activities must be performed to ensure the accuracy and validity of samples collected and the corresponding results. During closure activities, equipment, field and trip blanks will be utilized. These blanks will be utilized for the background concrete, certification concrete and certification wipe. These blanks will be taken with a minimum frequency of one of each type per twenty samples per day. Equipment blanks will consist of deionized water that is transported to the site, opened in the field, poured through or over the sampling device, collected in a sample container and sent to the laboratory. Field blanks will consist of deionized water that is transported to the site, transferred from one container to another, and sent to the laboratory. Trip blanks will consist of deionized water that is transported to the site and sent to the laboratory without being opened.

13.4.7 Personnel Protection

All personnel involved in the inspection, sampling, decontamination, and removal activities will have been trained with respect to the applicable provisions of the Occupational Health and Safety Act. To ensure the safety of the site workers, appropriate personal protec-

tion equipment will be utilized as required for the site activity in progress.

Recommended personal protection levels for the different site activities are shown on Table 13.5. The appropriate personal protective equipment for the different levels of protection is shown on Table 13.6.

To determine when conditions exist which would cause the contingent level of protection to be utilized, ambient air monitoring of the work area will be conducted as described in Section 13.4.1.1.

13.4.8 Equipment Decontamination

To carry out the closure activities outlined in this report, the following equipment will be utilized:

- Dry/wet vacuums
- Vacuum truck with necessary hoses (if necessary)
- Roll-off
- Shovels
- Steam jenny
- 55-gallon drums
- Squeegees
- Concrete core drill
- hammer and chisel
- Air purification respirators
- Jackhammer

Prior to placing this equipment back into service, the procedure outlined below will be followed to remove any residue.

TABLE 13.5
RECOMMENDED LEVELS
OF
PERSONAL PROTECTION

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

<u>Activity</u>	<u>Personnel</u>	<u>Recommended Level of Protection</u>
Removal of Waste Material	All personnel	Level C
Decontamination of the Floors and Tanks	All personnel	Level C
Sampling	All personnel	Level D (Level C)

Criteria for upgrading to the contingent level of personal protection are as follows:

Level D - Level C

Ambient air reading in the breathing zone above background readings.

TABLE 13.6
PERSONAL PROTECTIVE EQUIPMENT

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

<u>Level</u>	<u>Equipment</u>
D	Work Clothes Work Boots Gloves Safety Glasses Chemical-Resistant Boots* Hard Hat*
C	Full-Face Air Purifying Respirator Chemical-Resistant Clothing Chemical-Resistant Gloves Chemical-Resistant Boots

* Optional

- Step 1: All decontamination procedures will be performed in an area located away from any floor drains, floor trenches, etc. To prevent any runoff from this area, a 4-6 mil piece of plastic will be elevated 6-8 inches using sandbags or bags of absorbent material stationed around the decontamination area.
- Step 2: Equipment will be first cleaned using brushing and brooms to remove any visible residue.
- Step 3: All residue (liquid) collected from this operation will be placed in 55-gallon drums for off-site disposal at a permitted hazardous waste facility.
- Step 4: To remove any residue remaining on the equipment, the following washing procedure will be followed:

Small Equipment

- A. Small equipment such as shovels will be washed and rinsed over an open 55-gallon drum. A laboratory soap, containing the active ingredient trisodium phosphate will be used in the washing operation.
- B. The wash and rinse waters will be collected in the 55-gallon drum for off-site disposal at a permitted hazardous waste facility.
- C. Any spillage from this operation will be absorbed with speedi-dry or sand and shoveled in a 55-gallon drum for off-site disposal at a permitted hazardous waste facility.

Large Equipment

- A. Large equipment such as the backhoe, if required, will be first stationed on a 4-6 mil piece of plastic. The four sides of this plastic will then be elevated 6-8 inches using bags of sand/absorbent material to form a dike to collect wash and rinse waters.
- B. Using brushes and brooms, the large equipment will be washed using a laboratory soap containing the active ingredient trisodium phosphate.
- C. Using pressurized water, all soap will be removed.
- D. The wash and rinses collected in the dike will then be pumped into 55-gallon drums for off-site disposal at a permitted hazardous waste facility.
- E. Following removal of wash and rinse water, the piece of plastic will be placed in a 55-gallon drum for off-site disposal at a permitted hazardous waste facility.

Step 5: All disposable safety equipment such as coveralls, gloves, etc., will be collected in 55-gallon drums and disposed of off-site at a permitted hazardous waste facility.

Sampling and analysis of equipment after decontamination is not considered necessary. Rather, a visual examination verifying removal of all soil and stains should be sufficient to ensure that all contaminants are removed.

All decontamination work will be supervised and performed using qualified personnel. Qualified personnel will be required to be trained regarding the hazards of the substances which they may be exposed to and in the proper use of personal protective equipment prior to the start of decontaminating activities.

13.4.9 Schedule for Closure

The expected year for closing MacDermid, Inc.'s facility is projected to be 2050. Tables 13.7 and 13.8 detail the closure schedules for the container storage areas and the storage/recycling tanks.

13.4.10 Extension of Closure Time

If, after the approval of the closure plan, it is determined the closure time period is to exceed 180 days, MacDermid, Inc. will submit a petition for a closure time extension which justifies that a longer period of closure time is necessary. This petition will be submitted at least 30 days prior to the expiration of the 180 day closure period.

TABLE 13.7
CLOSURE SCHEDULE FOR CONTAINER STORAGE AREAS

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

<u>Closure Activity</u>	<u>Completion Date</u>
1. Notify the EPA and CT-DEP of expected closure	Day 1
2. Final date for accepting wastes	Day 180
3. Removal of leftover wastes	Day 210
4. Conducted Appendix IX Sampling as discussed in Section 13.4.3.2	Day 240*
5. <i>Decontaminate the concrete floors as discussed in Section 13.4.1.3</i>	Day 300
6. Inspect concrete floors for cracks and gaps	Day 300*
7. Sample the concrete floor and suspect areas as discussed in Sections 13.4.3.3, 13.4.3.4, and 13.4.3.5	Day 310*
8. Review analytical results to determine if clean closure has been achieved. If cannot be achieved submit a modified closure plan to US EPA and CT-DEP (See Section 13.4.11)	Day 330*
9. Disposal of rinse water, contaminated clean-up material and contaminated personal protective equipment	Day 330
10. Certification of closure by a Professional Engineer	Day 360*

*NOTE: Closure activity will be supervised by the certifying organization.

TABLE 13.8

CLOSURE SCHEDULE FOR WASTE
STORAGE/RECYCLING TANKS AND STORAGE AREAS

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

<u>Closure Activity</u>	<u>Completion Date</u>
1. Notify the EPA and CT-DEP of expected closure	Day 1
2. Final date for accepting wastes	Day 180
3. Removal of leftover wastes	Day 210
4. Conduct Appendix IX sampling as discussed in Section 13.4.3.2	Day 220*
5. Decontaminate the inside and outside of the tanks, piping and structural supports as discussed in Section 13.4.2.3	Day 240*
6. Collect wipe samples as discussed in Section 13.4.3.6	Day 250*
7. Review analytical results to determine if closure performance standards can be achieved	Day 280*
8. Based on results, remove tanks and dispose of off-site at a permitted hazardous waste facility or used equipment supplier/scrap metal dealer	Day 280*
9. Inspect concrete floors for cracks and gaps	Day 300*
10. Sample the concrete floor and suspect areas as discussed in Sections 13.4.3.3, 13.4.3.4 and 13.4.3.5	Day 300*
11. Review analytical results to determine if clean closure has been achieved. If cannot be achieved, submit a modified closure plan to US EPA and CT-DEP (see Section 13.4.11)	Day 330*
12. Disposal of rinse water, contaminated clean-up material and contaminated personal protective equipment	Day 330
13. Certification of closure by a Professional Engineer	Day 360*

*NOTE: Closure activity will be supervised by the certifying organization.

13.4.11 Amendment of Closure Plan

In accordance with Section 264.112 MacDermid will amend the closure plan prior to closure whenever: (1) changes in operating plans or facility design affects the closure plan; or (2) whenever there is a change in the expected year of closure of the facility. These amendments will be made at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the closure plan.

Following approval of the closure plan and implementation of the closure activities, MacDermid, Inc. will submit a modified plan within thirty (30) days after an unexpected event. Such unexpected event shall include the inability to close the regulated units "clean". If extensive contamination exists and closure cannot be completed according to the approved plan, MacDermid, Inc. will submit a modified plan to close the storage/recycling area with the appropriate post-closure. If the amendment to the plan is defined as a major modification according to 40 CFR 270.41 and 270.42, the modification to the plan will have to be approved according to the procedures in 40 CFR 264.112.

13.4.12 Closure Cost Estimate

In accordance with Section 264.142 and 264.197, the estimated costs to complete closure of the storage/recycling area is provided in Tables 13.9 and 13.10. All costs are based on 1990 dollars and assume a third party to perform the closure activities. These costs are based upon the following:

1. Operator @ \$40/hour
2. Supervisor @ \$50/hour
3. Disposal of wastes at the following rates
 - Contaminated clean-up and personal protective equipment \$250/drum
 - Decontamination rinse water \$150/drum
\$.50/gal.(bulk)
4. Waste transportation @ \$300/trip
5. Equipment
 - Basic safety equipment (per person) \$ 75/day
 - Tools \$ 25/day
 - Air Monitoring Equipment \$100/day
 - Pressure Washer \$150/day
6. Professional Engineer @ \$95/hour
7. Laboratory Analysis
 - Wipe sample \$ 250
 - Concrete sample \$ 500
 - Appendix IX sample \$3,000
8. Waste Materials
 - 55 gallon drums \$200/drum
 - Bulk Waste \$1/gallon
 - Metal Hydroxide/Sulfide Sludge \$250/cu.yd.
 - Storage Tote (330 gallons) \$750/tote
 - Tanks \$350/ton

TABLE 13.9
CLOSURE COSTS - CONTAINER STORAGE AREAS

MACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

A.	Disposal of drummed wastes and roll-off	
	• 1,280 drums x \$200/drum (main container storage area)	\$256,000
	• 20 totes x \$750/tote (main container storage area)	15,000
	• 16 drums x \$200/drum (flammable materials storage area)	3,200
	• 54 drums x \$200/drum (combustible storage area)	10,800
	• 5 totes x \$750/tote (combustible storage area)	3,750
	• 1 roll-off x 26 cubic yards/roll-off x \$250/cubic yard	6,500
B.	Transportation of drummed wastes and roll-off	
	• 1,375 drums/totes x trip/80 containers x \$300/trip	5,156
	• 1 roll-off x trip/roll-off x \$1,500/trip	1,500
C.	Labor to handle drummed wastes and roll-off	
	• 1,375 drums ÷ 80 drums/hr. x \$40/hr.	688
	• 1 roll-off x 1 hr./roll-off x \$40/hr.	40
	• 7 hours supervision x \$50/hr.	350
D.	Decontamination of Storage Areas	
	• 2,000 gallons of rinse water @ \$.50/gal.	1,000
	• Transportation	300
	• Operators (2) time @ 80 hrs./each x \$40/hr.	6,400
	• Supervisor time @ 16 hrs. x \$50/hr.	800
	• Pressure washer rental @ 5 days x \$150/day	750
	• Safety equipment & tools @ \$200/day x 15 days x 2 operators	6,000
	• Appendix IX Analysis @ 4 samples x \$3,000/sample	12,000
	• Laboratory Analysis of concrete @ 20 samples x \$500/sample	10,000
	• Trip, field, and equipment blanks @ 3 samples x \$500/sample	1,500
E.	Disposal of Personal Protective Equipment	
	• Disposal of 1 drum x \$750/drum	750
	• Transportation	300
F.	Professional Engineer Certification of Closure	
	• 8 hours x \$95/hr.	760

TOTAL

~~\$342,044~~
343,544

SAY

\$342,000
343,500

APP IX - same

don't need to detail for WCA

may have to change w/new site area

don't need change

add field trip blanks? \$1500

Closure Costs
are being adjusted

TABLE 13.10

CLOSURE COSTS - WASTE STORAGE/RECYCLING TANKS
AND STORAGE AREASMACDERMID, INC.
526 HUNTINGDON AVENUE
WATERBURY, CONNECTICUT

A. Disposal of bulk waste		
• 29,000 gallons x \$100/gallon (waste storage tanks)		\$ 92,775
• 63,775 gallons x \$100/gallon (recycling tanks)		
B. Transportation		
• 92,775 gallons x trip/5,000 gallons x \$300/trip		5,700
C. Labor to handle bulk waste		
• 4 hours operators time x \$40/hour		160
• 2 hours supervisors time x \$50/hour		100
D. Decontamination of Storage Area & Tanks		
• 9,275 gallons of rinse water @ \$0.50/gallon		4,638
• Transportation		600
• Operators (2) time @ 20 hours/each x \$40/hour		1,600
• Supervisor time @ 4 hours x \$50/hour		200
• Pressure washer rental @ 2 days x \$150/day		300
• Safety equipment & tools @ \$200/day x 2 operators x 2 days		800
• Laboratory analysis		12,000
4 Appendix IX samples @ \$3,000/sample		12,000
24 concrete samples x \$500/sample		12,000
48 wipe samples x \$250/sample		12,000
E. Disposal of personal protective equipment		
• Disposal of 1 drum x \$750/drum		750
• Transportation		300
F. Professional Engineer - Certification of Closure		
• 2 hours x \$95/hour		190
TOTAL		\$142,118 147,118
SAY		\$142,000 147,000

3 @ \$500/sample \$1500
6 @ \$250/sample \$1500

13.4.13 Certification of Closure

Certification at the completion of closure by a Licensed Professional Engineer is required. A member of the certifying organization will be present during all major closure activities to assure that the approved closure plan is executed (see Tables 13.7 and 13.8). The following certification will be submitted to the EPA Region I Administrator and the Connecticut Department of Environmental Protection within 60 days of completion of closure activities.

"I, _____, for _____
or _____, a hazardous waste
TSDF, and I, _____, P.E., employed
by _____ certify by means of
signatures, that the facility named above has been
closed in accordance with the method specified by the
Closure Plan and attached hereto.

Closure was completed on _____,
after receiving the final volume of material on
_____.

Company Name Engineer P.E.

Date Date

Along with the closure certification, a list of departures from the plan, a photographic record, sampling results, manifests and any other pertinent documents verifying closure will be provided to the CT-DEP and EPA.

13.5 Partial Closure

Partial closure is not expected nor projected for this facility. In the event that the facility determines that it is necessary to close a part of this facility, the closure plan will be amended to indicate the closure schedule for partial closure. In such circumstances, the amended closure plan will be submitted to the EPA Regional Administrator 180 days before a partial closure is expected to begin.

Partial closure of any portion of the facility will be carried out according to the procedures detailed in Section 13.4.

13.6 Closure Cost Adjustment [40 CFR 264.142(b) and (c)]

Within thirty (30) days after the end of MacDermid, Inc.'s fiscal year, the closure cost estimate (see Section 13.4.12) will be adjusted using the Department of Commerce's Annual Implicit Price Deflator for the Gross National product. The closure cost will also be revised no later than thirty (30) days following DEP's approval of a modification request (e.g. determine contamination is to the subgrade), if the change in the closure plan increases the cost of closure.

APPENDIX A
CHAIN-OF-CUSTODY

[illegible]

APPENDIX B

APPENDIX IX ANALYTICAL METHODS

Environmental Protection Agency

Part 264, App. IX

APPENDIX IX—GROUND-WATER MONITORING LIST ¹GROUND-WATER MONITORING LIST ¹

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Sug- gested meth- ods ⁵	PQL (µg/L) ⁶
Acenaphthene.....	83-32-9	Acenaphthylene, 1,2-dihydro.....	8100	200
			8270	10
Acenaphthylene.....	208-96-8	Acenaphthylene.....	8100	200
			8270	10
Acetone.....	67-64-1	2-Propanone.....	8240	100
Acetophenone.....	98-86-2	Ethanone, 1-phenyl.....	8270	10
Acetonitrile; Methyl cyanide.....	75-05-8	Acetonitrile.....	8015	100
2-Acetylaminofluorene; 2-AAF.....	53-96-3	Acetamide, N-9H-fluoren-2-yl.....	8270	10
Acrolein.....	107-02-8	2-Propenal.....	8030	5
			8240	5
Acrylonitrile.....	107-13-1	2-Propenenitrile.....	8030	5
			8240	5
Aldrin.....	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro- (1α,4α,4aβ,5α,8α,8aβ)	8080	0.05
			8270	10
Allyl chloride.....	107-05-1	1-Propene, 3-chloro.....	8010	5
			8240	100
4-Aminobiphenyl.....	92-67-1	[1,1'-Biphenyl]-4-amine.....	8270	10
Aniline.....	62-53-3	Benzenamine.....	8270	10
Anthracene.....	120-12-7	Anthracene.....	8100	200
			8270	10
Antimony.....	(Total)	Antimony.....	6010	300
			7040	2,000
			7041	30
Aramite.....	140-57-8	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester.	8270	10
Arsenic.....	(Total)	Arsenic.....	6010	500
			7060	10
			7061	20
Barium.....	(Total)	Barium.....	6010	20
			7080	1,000
Benzene.....	71-43-2	Benzene.....	8020	2
			8240	5
Benzo[a]anthracene; Benzanthracene.....	56-55-3	Benzo[a]anthracene.....	8100	200
			8270	10
Benzo[b]fluoranthene.....	205-99-2	Benzo[b]acephenanthrylene.....	8100	200
			8270	10
Benzo[k]fluoranthene.....	207-08-9	Benzo[k]fluoranthene.....	8100	200
			8270	10
Benzo[ghi]perylene.....	191-24-2	Benzo[ghi]perylene.....	8100	200
			8270	10
Benzo[a]pyrene.....	50-32-8	Benzo[a]pyrene.....	8100	200
			8270	10
Benzyl alcohol.....	100-51-6	Benzenemethanol.....	8270	20
Beryllium.....	(Total)	Beryllium.....	6010	3
			7090	50
			7091	2
alpha-BHC.....	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro- (1α,2α,3β,4α,5β,6β)-	8080	0.05
			8250	10
beta-BHC.....	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro- (1α,2β,3α,4β,5α,6β)-	8080	0.05
			8250	40
delta-BHC.....	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro- (1α,2α,3α,4β,5α,6β)-	8080	0.1
			8250	30
gamma-BHC; Lindane.....	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro- (1α,2α,3β,4α,5α,6β)-	8080	0.05
			8250	10
Bis(2-chloroethoxy)methane.....	111-91-1	Ethane, 1,1'-(methylenebis(oxy))bis(2-chloro-.....	8270	10
Bis(2-chloroethyl)ether.....	111-44-4	Ethane, 1,1'-oxybis(2-chloro-.....	8270	10
Bis(2-chloro-1-methylethyl) ether; 2,2'-Di-chlorodisopropyl ether.....	108-60-1	Propane, 2,2'-oxybis[1-chloro-.....	8010	100
			8270	10

GROUND-WATER MONITORING LIST ¹—Continued

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Sug- gested meth- ods ⁵	PQL (µg/L) ⁶
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl)ester.	8060	20
Bromodichloromethane	75-27-4	Methane, bromodichloro-	8270	10
Bromoform; Tribromomethane	75-25-2	Methane, tribromo-	8010	1
4-Bromophenyl phenyl ether	101-55-3	Benzene, 1-bromo-4-phenoxy-	8240	5
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester.	8010	2
Cadmium	(Total)	Cadmium	8240	5
			8270	10
			8060	5
			8270	10
			6010	40
			7130	50
			7131	1
Carbon disulfide	75-15-0	Carbon disulfide	8240	5
Carbon tetrachloride	56-23-5	Methane, tetrachloro-	8010	1
			8240	5
Chlordane	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octach- loro-2,3,3a,4,7,7a-hexahydro-.	8080	0.1
p-Chloroaniline	106-47-8	Benzenamine, 4-chloro-	8250	10
Chlorobenzene	108-90-7	Benzene, chloro-	8270	20
			8010	2
			8020	2
			8240	5
Chlorobenzilate	510-15-6	Benzeneacetic acid, 4-chloro-α-(4-chlorophenyl)- α-hydroxy-, ethyl ester.	8270	10
p-Chloro-m-cresol	59-50-7	Phenol, 4-chloro-3-methyl-	8040	5
			8270	20
Chloroethane; Ethyl chloride	75-00-3	Ethane, chloro-	8010	5
			8240	10
Chloroform	67-66-3	Methane, trichloro-	8010	0.5
			8240	5
2-Chloronaphthalene	91-58-7	Naphthalene, 2-chloro-	8120	10
			8270	10
2-Chlorophenol	95-57-8	Phenol, 2-chloro-	8040	5
			8270	10
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4-phenoxy-	8270	10
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro-	8010	50
			8240	5
Chromium	(Total)	Chromium	6010	70
			7190	500
			7191	10
Chrysene	218-01-9	Chrysene	8100	200
			8270	10
Cobalt	(Total)	Cobalt	6010	70
			7200	500
			7201	10
Copper	(Total)	Copper	6010	60
			7210	200
m-Cresol	108-39-4	Phenol, 3-methyl-	8270	10
o-Cresol	95-48-7	Phenol, 2-methyl-	8270	10
p-Cresol	106-44-5	Phenol, 4-methyl-	8270	10
Cyanide	57-12-5	Cyanide	9010	40
2,4-D; 2,4-Dichlorophenoxyacetic acid.	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	8150	10
4,4'-DDD	72-54-8	Benzene 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	8080	0.1
			8270	10
4,4'-DDE	72-55-9	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	8080	0.05
			8270	10
4,4'-DDT	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- chloro-	8080	0.1
			8270	10
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S- (2,3- dichloro-2-propenyl) ester.	8270	10
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene	8100	200
			8270	10
Dibenzofuran	132-64-9	Dibenzofuran	8270	10
Dibromochloromethane; Chlorodi- bromomethane	124-48-1	Methane, dibromochloro-	8010	1
			8240	5
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	Propane, 1,2-dibromo-3-chloro-	8010	100
			8240	5
			8270	10

Environmental Protection Agency

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GROUND-WATER MONITORING LIST ¹—Continued

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Sug- gested meth- ods ⁵	PQL (μ g/L) ⁶
1,2-Dibromoethane; Ethylene dibro- mide.	106-93-4	Ethane, 1,2-dibromo-.....	8010	10
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester.....	8240	5
			8060	5
			8270	10
o-Dichlorobenzene.....	95-50-1	Benzene, 1,2-dichloro-.....	8010	2
			8020	5
			8120	10
			8270	10
m-Dichlorobenzene.....	541-73-1	Benzene, 1,3-dichloro-.....	8010	5
			8020	5
			8120	10
			8270	10
p-Dichlorobenzene.....	106-46-7	Benzene, 1,4-dichloro-.....	8010	2
			8020	5
			8120	15
			8270	10
3,3'-Dichlorobenzidine	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-.....	8270	20
trans-1,4-Dichloro-2-butene	110-57-6	2-Butene, 1,4-dichloro-, (E)-	8240	5
Dichlorodifluoromethane	75-71-8	Methane, dichlorodifluoro-	8010	10
			8240	5
1,1-Dichloroethane	75-34-3	Ethane, 1,1-dichloro-.....	8010	1
			8240	5
1,2-Dichloroethane; Ethylene di- chloride.	107-06-2	Ethane, 1,2-dichloro-.....	8010	0.5
			8240	5
1,1-Dichloroethylene; Vinylidene chloride.	75-35-4	Ethene, 1,1-dichloro-	8010	1
			8240	5
trans-1,2-Dichloroethylene.....	156-60-5	Ethene, 1,2-dichloro-, (E)-.....	8010	1
			8240	5
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-.....	8040	5
			8270	10
2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-.....	8270	10
1,2-Dichloropropane	78-87-5	Propane, 1,2-dichloro-.....	8010	0.5
			8240	5
cis-1,3-Dichloropropene	10061-01-5	1-Propene, 1,3-dichloro-, (Z)-	8010	20
			8240	5
trans-1,3-Dichloropropene	10061-02-6	1-Propene, 1,3-dichloro-, (E)-	8010	5
			8240	5
Dieldrin.....	60-57-1	2,7,3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-, (1a α ,2 β ,2a α ,3 β ,6 β ,6a α ,7 β ,7a α)-	8080	0.05
			8270	10
Diethyl phthalate.....	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester.....	8060	5
			8270	10
O,O-Diethyl O-2-pyrazinyl phos- phorothioate; Thionazin	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester.	8270	10
Dimethoate	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(meth- ylamino)-2-oxoethyl] ester.	8270	10
p-(Dimethylamino)azobenzene.....	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-.....	8270	10
7,12-Dimethylbenz[a]anthracene.....	57-97-6	Benz[a]anthracene, 7,12-dimethyl-.....	8270	10
3,3'-Dimethylbenzidine	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-.....	8270	10
alpha, alpha-Dimethylphenethyla- mine.	122-09-8	Benzeneethanamine, α,α -dimethyl-.....	8270	10
2,4-Dimethylphenol.....	105-67-9	Phenol, 2,4-dimethyl-.....	8040	5
			8270	10
Dimethyl phthalate.....	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	8060	5
			8270	10
m-Dinitrobenzene.....	99-65-0	Benzene, 1,3-dinitro-.....	8270	10
4,6-Dinitro-o-cresol	534-52-1	Phenol, 2-methyl-4,6-dinitro-.....	8040	150
			8270	50
2,4-Dinitrophenol.....	51-28-5	Phenol, 2,4-dinitro-.....	8040	150
			8270	50
2,4-Dinitrotoluene.....	121-14-2	Benzene, 1-methyl-2,4-dinitro-.....	8090	0.2
			8270	10
2,6-Dinitrotoluene.....	606-20-2	Benzene, 2-methyl-1,3-dinitro-.....	8090	0.1
			8270	10
Dinoseb; DNBP; 2-sec-Butyl-4,6- dinitrophenol	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro	8150	1
			8270	10
Di-n-octyl phthalate	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester.....	8060	30
			8270	10

GROUND-WATER MONITORING LIST ¹—Continued

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Sug- gested meth- ods ⁵	POL (µg/L) ⁶
1,4-Dioxane	123-91-1	1,4-Dioxane	8015	150
Diphenylamine	122-59-4	Benzenamine, N-phenyl	8270	10
Disulfoton	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2- (ethylthio)ethyl]ester	8140	2
			8270	10
Endosulfan I	959-98-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a- hexahydro-, 3-oxide, (3α,5α,6α,9α,9aβ)-	8080	0.1
			8250	10
Endosulfan II	33213-65-9	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro- 1,5,5a,6,9,9a-hexahy- dro-, 3-oxide, (3α,5α,6β,9β,9aα)-	8080	0.05
Endosulfan sulfate	1031-07-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro- 1,5,5a,6,9,9a-hexahy- dro-, 3,3-dioxide	8080	0.5
			8270	10
Endrin	72-20-8	2,7,3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a- octahydro-, (1αα, 2β,2aβ,3α,6α, 6aβ,7β,7aα)-	8080	0.1
			8250	10
Endrin aldehyde	7421-93-4	1,2,4-Methenocyclopenta[cd]pentalene-5- carboxaldehyde, 2,2a,3,3,4,7-hexachlorodeca- hydro-, (1α,2β,2aβ,4β,4aβ,5β,6aβ,6bβ,7R*)-	8060	0.2
			8270	10
Ethylbenzene	100-41-4	Benzene, ethyl-	8020	2
			8240	5
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	8015	10
			8240	5
			8270	10
Ethyl methanesulfonate	62-50-0	Methanesulfonic acid, ethyl ester	8270	10
Famphur	52-85-7	Phosphorothioic acid, O-[4- [(dimethylamino)sulfonyl]phenyl]-O,O-dimethyl ester	8270	10
Fluoranthene	206-44-0	Fluoranthene	8100	200
			8270	10
Fluorene	86-73-7	9H-Fluorene	8100	200
			8270	10
Heptachlor	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro-	8080	0.05
			8270	10
Heptachlor epoxide	1024-57-3	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a,- hexahydro-, (1αα,1bβ,2α,5α,5aβ,6β,6aα)-	8080	1
			8270	10
Hexachlorobenzene	118-74-1	Benzene, hexachloro-	8120	0.5
			8270	10
Hexachlorobutadiene	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	8120	5
			8270	10
Hexachlorocyclopentadiene	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	8120	5
			8270	10
Hexachloroethane	67-72-1	Ethane, hexachloro-	8120	0.5
			8270	10
Hexachlorophene	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	8270	10
Hexachloropropene	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	8270	10
2-Hexanone	591-78-6	2-Hexanone	8240	50
Indeno(1,2,3-cd)pyrene	193-39-5	Indeno[1,2,3-cd]pyrene	8100	200
			8270	10
Isobutyl alcohol	78-83-1	1-Propanol, 2-methyl-	8015	50
Isodrin	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexachloro-1,4,4a,5,8,8a hexahydro- (1α,4α,4aβ,5β,8β,8aβ)-	8270	10
Isophorone	78-59-1	2-Cyclohexen-1-one, 3,5,5-trimethyl-	8090	60
			8270	10
Isosafrole	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	8270	10
Kepone	143-50-0	1,3,4-Metheno-2H-cyclobuta-[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	8270	10
Lead	(Total)	Lead	6010	40
			7420	1,000
			7421	10
Mercury	(Total)	Mercury	7470	2
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-	8015	5
			8240	5
Methapyrene	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'- (2-thienylmethyl)-	8270	10

GROUND-WATER MONITORING LIST ¹—Continued

Common name ^a	CAS RN ^a	Chemical abstracts service index name ^a	Sug- gested meth- ods ^b	PQL (μ g/L) ^c
Methoxychlor.....	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-methoxy-.....	8080 8270	2 10
Methyl bromide; Bromomethane.....	74-83-9	Methane, bromo-.....	8010 8240	20 10
Methyl chloride; Chloromethane.....	74-87-3	Methane, chloro-.....	8010 8240	1 10
3-Methylcholanthrene.....	56-49-5	Benz[<i>j</i>]aceanthrylene, 1,2-dihydro-3-methyl-.....	8270	10
Methylene bromide; Dibromomethane.....	74-95-3	Methane, dibromo-.....	8010 8240	15 5
Methylene chloride; Dichloromethane.....	75-09-2	Methane, dichloro-.....	8010 8240	5 5
Methyl ethyl ketone; MEK.....	78-93-3	2-Butanone.....	8015 8240	10 100
Methyl iodide; Iodomethane.....	74-88-4	Methane, iodo-.....	8010 8240	40 5
Methyl methacrylate.....	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester.....	8015 8240	2 5
Methyl methanesulfonate.....	66-27-3	Methanesulfonic acid, methyl ester.....	8270	10
2-Methylnaphthalene.....	91-57-6	Naphthalene, 2-methyl-.....	8270	10
Methyl parathion; Parathion methyl.....	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitro-phenyl) ester.....	8140 8270	0.5 10
4-Methyl-2-pentanone; Methyl isobutyl ketone.....	108-10-1	2-Pentanone, 4-methyl-.....	8015 8240	5 50
Naphthalene.....	91-20-3	Naphthalene.....	8100 8270	200 10
1,4-Naphthoquinone.....	130-15-4	1,4-Naphthalenedione.....	8270	10
1-Naphthylamine.....	134-32-7	1-Naphthalenamine.....	8270	10
2-Naphthylamine.....	91-59-8	2-Naphthalenamine.....	8270	10
Nickel.....	(Total)	Nickel.....	6010 7520	50 400
o-Nitroaniline.....	88-74-4	Benzenamine, 2-nitro-.....	8270	50
m-Nitroaniline.....	99-09-2	Benzenamine, 3-nitro-.....	8270	50
p-Nitroaniline.....	100-01-6	Benzenamine, 4-nitro-.....	8270	50
Nitrobenzene.....	98-95-3	Benzene, nitro-.....	8090 8270	40 10
o-Nitrophenol.....	88-75-5	Phenol, 2-nitro-.....	8040 8270	5 10
p-Nitrophenol.....	100-02-7	Phenol, 4-nitro-.....	8040 8270	10 50
4-Nitroquinoline 1-oxide.....	56-57-5	Quinoline, 4-nitro-, 1-oxide.....	8270	10
N-Nitrosodi-n-butylamine.....	924-16-3	1-Butanamine, N-butyl-N-nitroso-.....	8270	10
N-Nitrosodiethylamine.....	55-18-5	Ethanamine, N-ethyl-N-nitroso-.....	8270	10
N-Nitrosodimethylamine.....	62-75-9	Methanamine, N-methyl-N-nitroso-.....	8270	10
N-Nitrosodiphenylamine.....	86-30-6	Benzenamine, N-nitroso-N-phenyl-.....	8270	10
N-Nitrosodipropylamine; Di-n-propylnitrosamine.....	621-64-7	1-Propanamine, N-nitroso-N-propyl-.....	8270	10
N-Nitrosomethylethylamine.....	10595-95-6	Ethanamine, N-methyl-N-nitroso-.....	8270	10
N-Nitrosomorpholine.....	59-89-2	Morpholine, 4-nitroso-.....	8270	10
N-Nitrosopiperidine.....	100-75-4	Piperidine, 1-nitroso-.....	8270	10
N-Nitrosopyrrolidine.....	930-55-2	Pyrrolidine, 1-nitroso-.....	8270	10
5-Nitro-o-toluidine.....	99-55-8	Benzenamine, 2-methyl-5-nitro-.....	8270	10
Parathion.....	56-38-2	Phosphorothioic acid, O,O-diethyl-O-(4-nitro-phenyl) ester.....	8270	10
Polychlorinated biphenyls; PCBs.....	See Note 7	1,1'-Biphenyl, chloro derivatives.....	8080 8250	50 100
Polychlorinated dibenzo-p-dioxins; PCDDs.....	See Note 8	Dibenzo[<i>b,e</i>][1,4]dioxin, chloro derivatives.....	8280	0.01
Polychlorinated dibenzofurans; PCDFs.....	See Note 9	Dibenzofuran, chloro derivatives.....	8280	0.01
Pentachlorobenzene.....	608-93-5	Benzene, pentachloro-.....	8270	10
Pentachloroethane.....	76-01-7	Ethane, pentachloro-.....	8240 8270	5 10
Pentachloronitrobenzene.....	82-68-8	Benzene, pentachloronitro-.....	8270	10
Pentachlorophenol.....	87-86-5	Phenol, pentachloro-.....	8040 8270	5 50
Phenacetin.....	62-44-2	Acetamide, N-(4-ethoxyphenyl).....	8270	10
Phenanthrene.....	85-01-8	Phenanthrene.....	8100 8270	200 10

GROUND-WATER MONITORING LIST ¹—Continued

Common name ¹	CAS RN ²	Chemical abstracts service index name ⁴	Sug- gested meth- ods ³	PQL (µg/L) ⁵
Phenol.....	108-95-2	Phenol.....	8040	1
p-Phenylenediamine.....	106-50-3	1,4-Benzenediamine.....	8270	10
Phorate.....	298-02-2	Phosphorodithioic acid, O,O-diethyl S- [(ethylthio)methyl] ester.....	8140	2
2-Picoline.....	109-06-8	Pyridine, 2-methyl.....	8270	10
Pronamide.....	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-pro- pyl)-.....	8240	5
Propionitrile; Ethyl cyanide.....	107-12-0	Propanenitrile.....	8270	10
Pyrene.....	129-00-0	Pyrene.....	8015	60
Pyridine.....	110-86-1	Pyridine.....	8240	5
Safrole.....	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-.....	8270	10
Selenium.....	(Total)	Selenium.....	6010	750
Silver.....	(Total)	Silver.....	7740	20
Silvex; 2,4,5-TP.....	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-.....	7741	20
Styrene.....	100-42-5	Benzene, ethenyl.....	6010	70
Sulfide.....	18496-25-8	Sulfide.....	7760	100
2,4,5-T; 2,4,5-Trichlorophenoxyace- tic acid.....	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-.....	8150	2
2,3,7,8-TCDD; 2,3,7,8-Tetrachloro- dibenzo-p-dioxin.....	1746-01-6	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-.....	9030	10,000
1,2,4,5-Tetrachlorobenzene.....	95-94-3	Benzene, 1,2,4,5-tetrachloro-.....	8150	2
1,1,1,2-Tetrachloroethane.....	630-20-6	Ethane, 1,1,1,2-tetrachloro-.....	8280	0.005
1,1,2,2-Tetrachloroethane.....	79-34-5	Ethane, 1,1,2,2-tetrachloro-.....	8270	10
Tetrachloroethylene; Perchloroeth- ylene; Tetrachloroethene.....	127-18-4	Ethene, tetrachloro-.....	8010	5
2,3,4,6-Tetrachlorophenol.....	58-90-2	Phenol, 2,3,4,6-tetrachloro-.....	8240	5
Tetraethyl dithiopyrophosphate; Sulfotepp.....	3689-24-5	Thiodiphosphoric acid [(HO) ₂ P(S)] ₂ O, tetraethyl ester.....	8010	0.5
Thallium.....	(Total)	Thallium.....	8270	10
Tin.....	(Total)	Tin.....	6010	400
Toluene.....	108-88-3	Benzene, methyl-.....	7840	1,000
o-Toluidine.....	95-53-4	Benzenamine, 2-methyl-.....	7841	10
Toxaphene.....	8001-35-2	Toxaphene.....	7870	8,000
1,2,4-Trichlorobenzene.....	120-82-1	Benzene, 1,2,4-trichloro-.....	8020	2
1,1,1-Trichloroethane; Methylchloro- form.....	71-55-6	Ethane, 1,1,1-trichloro-.....	8240	5
1,1,2-Trichloroethane.....	79-00-5	Ethane, 1,1,2-trichloro-.....	8270	10
Trichloroethylene; Trichloroethene.....	79-01-6	Ethene, trichloro-.....	8240	5
Trichlorofluoromethane.....	75-69-4	Methane, trichlorofluoro-.....	8010	10
2,4,5-Trichlorophenol.....	95-95-4	Phenol, 2,4,5-trichloro-.....	8240	5
2,4,6-Trichlorophenol.....	88-06-2	Phenol, 2,4,6-trichloro-.....	8270	10
1,2,3-Trichloropropane.....	96-18-4	Propane, 1,2,3-trichloro-.....	8010	10
O,O,O-Triethyl phosphorothioate.....	126-68-1	Phosphorothioic acid, O,O,O-triethyl ester.....	8240	5
sym-Trinitrobenzene.....	99-35-4	Benzene, 1,3,5-trinitro-.....	8270	10
Vanadium.....	(Total)	Vanadium.....	6010	80
Vinyl acetate.....	108-05-4	Acetic acid, ethenyl ester.....	7910	2,000
			7911	40
			8240	5

GROUND-WATER MONITORING LIST ¹—Continued

Common name ²	CAS RN ³	Chemical abstracts service index name ⁴	Sug- gested meth- ods ⁵	PQL (µg/L) ⁶
Vinyl chloride.....	75-01-4	Ethene, chloro.....	8010	2
			8240	10
Xylene (total).....	1330-20-7	Benzene, dimethyl.....	8020	5
			8240	5
Zinc.....	(Total)	Zinc.....	6010	20
			7950	50

¹ The regulatory requirements pertain only to the list of substances; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnotes 5 and 6.

² Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

³ Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

⁴ CAS index names are those used in the 9th Cumulative Index.

⁵ Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 "Test Methods for Evaluating Solid Waste", third edition, November 1986. Analytical details can be found in SW-846 and in documentation on file at the agency. CAUTION: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

⁶ Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

⁷ Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor-1216 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

⁸ This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins. The PQL shown is an average value for PCDD congeners.

⁹ This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans. The PQL shown is an average value for PCDF congeners.

[52 FR 25947, July 9, 1987]

ATTACHMENT D

PERSONNEL TRAINING PLAN

8.0 PERSONNEL TRAINING

8.1 Regulatory Requirements

Federal Regulations (CFR 40) specifically require owners or operators of a Hazardous Waste Management (HWM) facility to prepare an outline of introductory and continuing training programs "to prepare persons to operate or maintain the HWM facility in a safe manner". The regulatory requirements contained in 264.16 regarding employee training are as follows:

- Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this part.
- This program must be directed by a person trained in hazardous waste management procedures and shall include instructions which teach facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.
- At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:
 - Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
 - Key parameters for automatic waste feed cutoff systems;
 - Communications or alarm systems;
 - Response to fires or explosions;
 - Response to ground water contamination incidents;
 - Shutdown of operations; and
 - Properties and hazardous nature of the hazardous waste at the facility.

- The training document detailed in this plan includes training relevant to the actual tasks at this facility. This plan may include training in the following actual tasks at the facility:
 - Use of personnel protective equipment;
 - Safety measures;
 - Manifest tracking, preparation;
 - Sampling procedures and handling;
 - Facility operation and maintenance;
 - Contingency measures;
 - Facility inspection;
 - Regulatory requirements;
 - Facility recordkeeping;
 - Maintaining site security; and
 - Prevention of fire, spill, and explosion; and
 - Familiarizes employees with the types of wastes handled at the facility and the hazards inherent in the handling of these wastes.
- Facility personnel must successfully complete the training program within six months of their assignment to the facility and must take part in an annual review of the program.
- Facility personnel engaged in hazardous waste activities will not work in unsupervised positions until their training is complete.
- The owner or operator must maintain documentation applicable to the training program outlined in 264.16.

In accordance with 29 CFR 1910.120(p)(7), all designated response personnel at MacDermid, Inc. who are involved with hazardous waste operations will receive at least 24 hours initial training (completed on February 19-20-21, 1990) and 8 hours of refresher training annually, thereafter. Provided under Appendix Y is a list of the personnel who attended the 24 hour training course and the instructor Michael H. Ziskin's qualifications.

At MacDermid, Inc., personnel will only respond to incidental releases of hazardous substances where the substance can be absorbed,

neutralized or otherwise controlled at the time of release by personnel in the immediate area or by maintenance personnel. MacDermid, Inc. personnel will not respond to an uncontrolled "emergency response" as defined under 29 CFR 1910.120(a)(3). In addition, MacDermid, Inc. will not conduct post-emergency response activities. Examples of the releases that will be managed by MacDermid, Inc. personnel are listed below:

- (1) Compatible material spills of 5, 55 and 330 gallon containers.
- (2) Leaks from valves, pumps, hoses of compatible materials.
- (3) Small fires which can be extinguished with on-site fire extinguishers.

8.2 Training Outline

The four elements of personnel training, critical to safe hazardous waste management, are as follows:

A. PERSONNEL SAFETY TRAINING

- Hazards and characteristics of chemical wastes;
- Selection and use of protective clothing and equipment for emergency situations;
- Health effects of chemicals in the work environment.

B. EMERGENCY PLANNING

- Emergency response;
- Contingency planning.

C. FACILITY OPERATION AND MAINTENANCE

- Hazard minimization through proper facility operation and maintenance

D. MAINTAINING RECORDS

- Regulatory compliance

Activities of hazardous waste facilities personnel can be distinguished as follows:

- Routine day-to-day hazardous waste handling, storage, and treatment operations.
- Emergency response activities in accordance with site contingency plan.

Personnel engaged in either of these activities, along with on-site supervisory personnel responsible for routine day-to-day hazardous waste management must be trained in pertinent aspects of proper hazardous waste handling.

Clearly, a training program which would provide the same level of instruction to all on-site personnel is neither workable nor desirable. Training must, therefore, be correlated to job descriptions. Consequently, the individual's position and specific duties will dictate the level of personnel training he or she will receive.

In this report, four (4) types of training programs are presented which are intended to cover all employees who take part in hazardous and CT-regulated waste management. Table 8.1 summarizes the types of training received by all employees requiring training. The department heads and/or Compliance Administrator, and/or designated professionally trained third party (i.e. consultant) will be responsible for the supervision of all training activities. All hazardous waste trainers must be trained in hazardous waste management procedures. The four programs are:

8.2.1 General Training Information Program

This program is intended to provide basic safety training information to all employees. The basic information presented

in this program is a necessary foundation for more specialized training that is orientated to specific jobs. Table 8.2 gives an outline of this classroom training program.

8.2.2 On-The-Job Training Program

This program is geared towards personnel who handle the wastes generated and received at the facility. These workers will be trained in area of marking and labeling containers, inspecting containers from structural defects, using emergency equipment, and shutdown operations. Physical and chemical hazards of the wastes generated and received will also be reviewed under this program. Table 8.3 gives an outline of this training program.

8.2.3 Limited Training at MacDermid Inc.

The Limited Training Program is geared towards personnel having more limited spheres of activity, responsibility and authority. These workers can be trained at a level less comprehensive than that of management personnel. Furthermore, depending upon the specific position, training in one or more areas relative to hazardous waste management might not be necessary.

Table 8.4 gives an outline of this classroom training program.

8.2.4 Broad Training at MacDermid, Inc.

At MacDermid, Inc., a relatively small number of individuals will be in supervisory and decision-making positions

with a degree of authority and responsibility which warrants broad training in all aspects of hazardous waste management pertinent to their facility.

The Broad Training Program is designed to provide management level personnel with the necessary background and perspective for decision-making activities which can impact both the operation and condition of the facility and health and welfare of the surrounding community. This level of instruction is comprehensive and constitutes a detailed overview of all pertinent aspects of hazardous waste management.

Table 8.5 gives an outline of this classroom training program.

8.3 Release Prevention and Response

All facility management personnel must become intimately familiar with the established facility Hazardous Waste Contingency Plan.

8.3.1 Drills

Drills will be held to practice all of these procedures and are treated with the same seriousness as an actual emergency.

During the on-site training session, the facility Contingency Plan will serve as the bases for discussion in this section.

TABLE 8.1
TRAINING REQUIREMENTS
MACDERMID, INC.
WATERBURY, CONNECTICUT

<u>Job Title</u>	<u>Name</u>	<u>General</u>	<u>Training Type</u>		<u>Broad</u>
			<u>On-The-Job</u>	<u>Limited</u>	
All Manufacturing Employees		X	X		
Compliance Administrator	Cherrie Gillis	X			X
Emergency Coordinator	John Miele	X			X
Alternate Emergency Coordinators (3)	Bill Schweiker	X			X
	Bob Ardziejaskas	X			X
	Frank Cruice	X			X
Driver - Waste Handler	P. Guillet	X	X	X	
	T. Prescott	X	X	X	
	E. Gough (retired)	X	X	X	
	K. Rilucci	X	X	X	
	E. Gray	X	X	X	
Traffic Supervisor for Wastes	L. Montaigne	X		X	
Materials Handler-Recyclable Materials - Group Leader	F. Brown	X		X	
Etchant Production - Group Leader	H. Zembroski	X		X	
True Waste Handler - Solvents/Inks	J. Alperin	X	X	X	
	B. Schweiker	X	X	X	
Quality Control Department	A. Bares	X		X	
Hazardous Waste Coordinator - Canadian Shipments/Non routine Shipments	C. Gillis	X		X	X
Quality Control Manager (Manufacturing)	R. Redline	X		X	
Shipping/Receiving Department - Group Leader	D. Fortier	X		X	
Micro Chemical Handler (Manufacturing)	H. Herminio	X	X	X	

TABLE 8.2
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

I. GENERAL CHEMICAL INTRODUCTION

A. Acids - A hydrogen containing substance which dissociates on solution in water to produce one or more hydrogen ions. Some examples handled at MacDermid:

1. Nitric Acid
 - a. Fumes in air
 - b. Attacks many metals
2. Sulfuric Acid
 - a. Generates extreme heat when mixed with water
 - b. Attacks many metals
3. Hydrochloric Acid
 - a. Fumes in air
 - b. Attacks many metals
4. Hydrofluoric Acid
 - a. Attacks glass as well as metals
5. Chromic Acid
 - a. Dusty when dry
 - b. Attacks many metals as a liquid

NOTE: Always add acids to water (A to W rule). Always use protective equipment when handling

B. Alkaline Materials -A substance having basic properties (pH higher than 7). A Base-dissociates on solution in water to produce one or more hydroxylions. Some examples handled at MacDermid:

1. Sodium Hydroxide (caustic soda)
 - a. Dry or liquid
 - b. Causes severe burns
2. Potassium Hydroxide (caustic potash)
 - a. Dry or liquid
 - b. Causes severe burns
3. Ammonium Hydroxide
 - a. Ammonia odor
4. Sodium Carbonate (soda ash)

NOTE: Hydroxides can cause severe burns that do not appear on immediate contact. Dry material should be added to water with agitation. Always use protective equipment when handling.

TABLE 8.2 (continued)
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

C. Flammables -Easily ignited. Flash points less than 100 degrees Fahrenheit. Some examples handled at MacDermid:

1. Methanol
2. Cyastat SP (trade name)
3. Sodium Hydrosulfite
4. Any red label item (red diamond with flame)
5. Cleaning mixing pots/tanks with solvents Required mandatory equipment:
 - a. Organic mist cartridge respirator
 - b. Neoprene gloves
 - c. Protective clothing

NOTE: No smoking when handling. No open flames nearby. Always use grounding stations and protective equipment.

D. Poisons and Toxic Substances - Materials that through chemical action can kill, injure, or impair. Some examples handled at MacDermid:

1. Cyanides
2. Darmex (trade name)
3. Formaldehyde
4. Metal salts

NOTE: Do not mix cyanides with acid. This generates poisonous fumes. Do not ingest poisons or toxic materials. Avoid breathing fumes or dust. Always use protective equipment when handling.

E. Oxidizers -Materials which cause oxidation of other substances (chemical addition of oxygen). Temperatures can be reached that may cause ignition of the oxidized material. Some examples handled at MacDermid:

1. Sodium Nitrate
2. Chromic Acid
3. Sodium Chlorite
4. Persulfates

NOTE: Avoid contact with corrosives. Special cases can cause fires - use caution when handling. Always use protective equipment when handling.

TABLE 8.2 (continued)
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

- F. Solvents - (A substance capable of dissolving another substance) Alcohol, Ethyl Acetate, Ethyl Alcohol, Hydro Carbon Solvent, Kerosene, Methanol, Methyl Ethyl Ketone, Organic Solvents, Toluene, Xylene, Xylol. Are usually flammable or combustible liquids. They contribute to air pollution and fire hazards. Inhalation, eyes and skin contact must be avoided. Mandatory equipment:
1. Respirator (type depends on solvent)
 2. Neoprene gloves
 3. Protective clothing

II. PROTECTIVE EQUIPMENT

A. Description

1. Face shields -worn when filling containers or adding chemicals to a mix that could cause splashing. This is optional but mandatory under circumstances as: extracting lab samples from 5 gal., 55 gal. containers, extracting raw material samples from trailer loads, disconnecting acid lines from pumps. Face shields will protect the eyes, face and neck in areas where workers are exposed to hazardous liquids, gases or sprays, or where there is the possibility of being hit by light objects.
2. Fume measuring device - instrument used to measure trace amounts of specific chemical fumes in the air.
3. Safety Glasses - mandatory. Must be worn at all times in the manufacturing areas.
4. Gloves - a safety precaution. Should be worn at all times when handling any and all types of chemicals. Rubber and cloth (for dirty drums, etc.) gloves are available, Neoprene for solvents.
5. Goggles - Full face protection. Used for maximum eye protection to keep dusts, mists, and splashing chemicals from eye contact strongly recommended. Mandatory in areas with severe eye hazards. Workers exposed to fumes or vapors or possible liquid splashes must wear goggles.
6. Grounding station - an electrical mechanical device to eliminate static electrical charges or sparks. Used between containers to transfer flammable materials.
7. Hard hats - worn when working below a platform, recommended. Required where there is the danger of falling objects or chemical splashes.

TABLE 8.2 (continued)
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

8. Harness for tank entry - a safety device worn when entering a confined space. It is used to extricate a person quickly in case of an emergency.
9. Lock out for power equipment - a mechanical device used to make electrically driven equipment inoperable. This is used for maintenance purposes.
10. Respirators - used when working with hazardous dusts and mists. Several types are available and the correct cartridge should be used. Optional but recommended in most cases. Required in some cases.
11. Scrubbers - exhausts which remove hazardous fumes from the air. The fumes are scrubbed with water or with a sodium hydroxide solution (two types of scrubbers) before release to the atmosphere. These are not to be confused with exhaust fans that vent directly to the outside.

B. Clothing

1. Provided by MacDermid
2. Are not chemical resistant
3. Aprons and rubber suits are available

C. Shoes

1. Steel toes required
2. Provided by MacDermid - two pairs per year for each employee.
3. Uppers not usually chemically resistant - soles usually will be.
4. Rubbers or boots are provided, if necessary

First Aid - Emergency treatment of acute poisoning: Acute poisoning may be the result of entry into the body of large or concentrated doses of a poison through:

1. Breathing (inhalation)
2. Swallowing (ingestion)
3. Skin absorption

General Procedures:

a. Inhalation:

1. Remove victim from contaminated area. Rescuers should be properly protected or provided with life lines.

TABLE 8.2 (continued)
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

2. Keep victim warm (not hot) and quiet. Lying flat is usually the best position.
 3. If breathing has stopped, give artificial respiration.
 4. Administer oxygen, if it is available.
 5. Keep breathing passage open. Examine mouth for false teeth and chewing gum and if present, remove them.
- b. Ingestion:
1. Attempt to empty the stomach by causing vomiting by use of an emetic. This should be done even if a period of several hours has passed since the poison was swallowed. Exceptions: Corrosive chemicals such as strong acids or caustic alkalies; victim having convulsions; victim unconscious.
 2. Dilute the poison by administering fluids in any of the following forms:
 - a. Plain tap water: 3-4 glasses.
 - b. Soapy water: 2-3 glasses.
 - c. Table salt in warm water: One tablespoon to an ordinary 8-ounce tumbler.
 - d. Milk: 3-4 glasses
- If these fluids are vomited, which is desirable, the dose may be repeated several times.
3. Give the victim a "universal antidote" i.e. a mixture of powdered burnt toast (charcoal), strong tea, and milk of magnesia. This will absorb and neutralize many poisons. (One piece of toast and 4 tablespoons of milk of magnesia in a cup of strong tea.
- c. Skin contact:
1. Dilute the contaminating substance with large amounts of water. This is best done in a shower, but may also be done with a hose, buckets or other means. The water should be lukewarm if possible.
 2. Remove contaminated clothing. Those assisting the victim should protect their own skin with gloves, if available.

TABLE 8.2 (continued)
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

3. Chemical burns of the eye should be treated with large amounts of water for 15 minutes or with a weak solution of bicarbonate of soda (a level teaspoonful of bicarbonate to 1 quart of warm, clean water).

III. MANUFACTURING EQUIPMENT USAGE

A. Forklift Training

1. Description
 - a. Gas
 - b. Electric
2. Load Limits
 - a. Determined by equipment availability within each department
3. Operation
 - a. Generally on the job training will be provided
 - b. Occasional instruction from Clarklift is provided
4. Maintenance
 - a. Daily check of oil and water
 - b. Routine maintenance under contract with Clarklift
5.
 - a. Check wheels on trucks before entering with forklift
 - b. No racing or wild driving
 - c. Sound horn near blind corners
 - d. No riders on skids or elsewhere

B. Emergency Equipment and Use.

1. Air Packs (Scott) - Self-contained life support system used for any chemical emergency. Located near most often used entrances.
2. Eyewashes - Located throughout each department on the floor and on the platforms. May be in combination with a shower and is used to wash eyes should chemicals come into contact with them.
3. Fire Alarms - There are many pull stations throughout the building and at all exits. You should become familiar with their locations.
4. Fire Blankets - There are a few blankets within the building. They are used to smother a fire on a person's body. You should be aware of their locations.

TABLE 8.2 (continued)
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

5. Fire Extinguishers - There are many located throughout the building. They are general purpose, ABC types, good for any fire in this building. You should be familiar with their location.
 6. Fire Hoses - There are a few fire hoses located in the building. They are high pressure and require two people to operate. One holds the hose while the other operates the valve.
 7. First Aid Cabinet - Located throughout the building. There is a supply of bandages, antiseptics, etc., for treatment of minor injuries.
 8. Oxygen - One unit located in each of the main areas. For emergency treatment only when overcome by fumes or other respiratory emergencies.
 9. pH Control - A sterile phosphate buffer solution used to neutralize acid and alkali burns of the eyes or skin.
 10. Showers - Located in combination with most eyewash stations. These are for emergency use only. There is also one in each of the two men's rooms in the manufacturing area. These are general purpose as well as for emergencies.
 11. Stretcher - There is one stretcher available for emergency use.
- C. Production Equipment
1. Each department has an assortment of equipment. Some of this is specialized for that department and some is general equipment available to all departments.
 2. On-the-job training will be provided in all phases of the equipment as it pertains to your position.
- D. Safety Equipment
1. All items listed in Table 10.2 of the Contingency Plan Protective Equipment are primarily used for safety purposes.

IV. OPERATION

- A. Work Flow
1. Order is received from customer.
 2. Finished goods inventory is allocated.
 3. At some point minimum stock levels are reached and a production order is generated.
 4. Raw materials are ordered and received.

TABLE 8.2 (continued)
GENERAL TRAINING INFORMATION PROGRAM

MACDERMID, INC.
WATERBURY, CONNECTICUT

5. Manufacturing schedules and produces the product.
6. Material is placed in finished goods storage.
7. Materials are shipped as needed.

B. Security

1. ADT on manufacturing plant (Gear Street and Huntingdon Avenue)
2. Sonitrol on warehouse (raw and finished) and tanker garage
3. Each department is responsible for securing their location at the close of business.
4. The storage yard has gates that are locked at the end of the day.

C. Buddy System

1. No one works alone.
2. Someone always is within shouting distance.

D. Accidents

1. Report immediately to supervisor.
2. File a report regardless of extent of injuries or lack of injuries.
3. Employees will be trained in the basic points of the Contingency Plan and its implementation (e.g. evacuation procedures).

TABLE 8.3 - ON-THE-JOB TRAINING PROGRAM

MACDERMID, INC.

- A. On-the-job training shall be conducted by the Group Leader of each department in Manufacturing.
- B. All wastes that are recycled by MacDermid will have the same or similar hazardous characteristics of materials being manufactured. Thereby, proper handling, hazardous characteristics, personal protective equipment training is one in the same for manufactured and waste materials.
- C. Information on marking, labelling, and proper DOT containers for wastes comes from the Production Manager, Compliance Manager or Process Engineer in Manufacturing each trained in DOT 49 CFR.
- D. Group Leaders of the department supervise new employees with hands-on training by initially walking through all the steps and procedures of the job until he feels confident that person can do the job with little or no supervision.
- E. Basic training will consist of the following:
 - 1. Waste feed cut-off systems as applicable to that job.
 - 2. Procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment.
 - 3. Communications and alarm systems for the department.
 - 4. Shutdown of operations for that department area.
 - 5. Properties and hazardous nature of hazardous waste and hazardous materials for items handled.
 - 6. OSHA 29 CFR 1910.1200 classroom training is mandatory to all employees when first hired and all employees prior to the Hazardous Communication standards that have been employed by MacDermid, have also had this training.
 - 7. OSHA 29 CFR 1910.120 24 hour training and 8 hour annual refresher depending on the job function.

TABLE 8.4

LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

FUNCTION:	Driver - Waste Handler
DUTY:	Transportation - Chemicals
TASK:	<ul style="list-style-type: none">• Pick-up waste reclaim from customer and transport bulk waste to reclaim facility or transfer facility.
ELEMENT:	<ul style="list-style-type: none">• Transports drummed waste reclaim to Waterbury, signs manifest as transporter.• Transports bulk waste reclaim from customer or Production Storage to railcar on Freight St.• Must complete a discrepancy checklist for each manifested shipment picked up.• Signs off as transporter and receiver at Freight St.
QUALIFICATIONS:	Licensed driver for vehicle operated, training in DOT and EPA Transportation Regulations. Should have at least a high school education.
TRAINING:	<ol style="list-style-type: none">1. <u>Personal Protection Equipment</u><ul style="list-style-type: none">• Hard hat, rubber gloves, rain gear (rubber), rubber boots, face mask, safety goggles, safety glasses.2. <u>Hazardous/Characteristics of wastes</u><ul style="list-style-type: none">• Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.3. <u>Waste manifest/labelling system</u><ul style="list-style-type: none">• Requirements for completion of waste labels, requirements for manifest completion.• Drivers carry examples with them in a 3 ring notebook.• Manifest Discrepancy Checklist required with each manifest to be completed and attached to manifest for MacDermid records.

TABLE 8.4 (continued)

LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

4. Forklift Operations
 - Daily inspection for fluid levels, leaks, brake, chain failure.
 - Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
5. Contingency Plan for Drivers
 - Procedure list (call list) for emergencies as state police, telephone numbers in states in which they travel through or pick-up wastes.
 - MacDermid emergency contact numbers as facility.
6. DOT 49 CFR Hazardous Materials - Review
 - Table 172.101/Review Motor Carrier Regulations on loading, unloading, truck safety inspections for lights, brakes, etc.
7. OSHA 29 CFR 1910.120

FUNCTION: Traffic Supervisor for Wastes

TASK: Schedules company truck pick-ups for reclaim wastes and outgoing wastes. Types company bills of lading and railcar manifests. Makes arrangements for railcar shipments for reclaim.

ELEMENT:

- After receipt of shipment of waste, make appropriate mailings for manifests and files for 3 year retention.
- Corrects manifests for addresses, etc. by initialing and dating change.
- Adds method of storage to incoming manifests as S01, S02.

TABLE 8.4 (continued)

LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

- Follow-up outgoing manifests to make sure TSDF signed copy is back in 15 days.
- Makes out all state(s) required transportation reports.

EDUCATION: At least a high school education, typing ability.

- TRAINING:
1. Waste Manifest System
 - Areas of manifest needed for completion by generator.
 - Discrepancy requirements/mailling procedures.
 - Recordkeeping (retention)
 2. OSHA 29 CFR 1910.1200
 - Employee's rights
 - Location of MSDS
 - How to read an MSDS.
 - Labelling information
 3. OSHA 29 CFR 1910.120

FUNCTION: Materials Handler - Recyclable Material - Group Leader

DUTY: Logs in manifests - Production/store recycled material.
Supervises loading/unloading wastes/storage/ manifests.

- ELEMENT:
- Supervises application of waste/shipping labels for shipment off-site.
 - Supervises and assists off-loading/loading of wastes using forklift from trucks.
 - Supervises and assists storage of drummed wastes.
 - Inspects storage and keeps inspection book for waste storage

EDUCATION: At least a high school education. Must be able to read/write English. Forklift and truck operation.

TABLE 8.4 (continued)

LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

TRAINING:

1. OSHA 29 CFR 1910.120 (24 hour)
2. OSHA 29 CFR 1910.1200
 - Employee's rights
 - Location of MSDS
 - How to read an MSDS.
 - Labelling information
3. Forklift Operations
 - Daily inspection for fluid levels, leaks, brake, chain failure.
 - Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
4. Manifest/Waste handling System
 - Areas of manifest needed for completion by generator.
 - Discrepancy requirements/mailling procedures.
 - Recordkeeping (retention)

FUNCTION:

Etchant Production - (Group Leaders)

DUTY:

Performs recycling of material/bulk storage/manifests.

Receives in and ships out via manifests, bulk etchant, assists loading/unloading of tanks for bulk spent etchant.

ELEMENT:

- Inspects bulk storage area and keeps inspection book for bulk storage and metal hydroxide sludge are.
- Logs in received and shipped bulk waste etchant.
- Assists loading/unloading bulk waste from tankers.
- Takes samples for waste analysis - etchant and sends to QC.

TABLE 8.4 (continued)

LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

EDUCATION:

Should have at least high school education and read/write English.

TRAINING:

1. OSHA 29 CFR 1910.1200
 - Employee's rights
 - Location of MSDS
 - How to read an MSDS.
 - Labelling information
 2. Forklift Operations
 - Daily inspection for fluid levels, leaks, brake, chain failure.
 - Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
 3. Manifest/Waste handling System
 - Areas of manifest needed for completion by generator.
 - Discrepancy requirements/mailling procedures.
 - Recordkeeping (retention)
 4. 29 CFR 1910.120
 5. Hazardous/Characteristics of wastes
 - Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.
 6. Personal Protection Equipment
 - Hart hat, rubber gloves, rain gear (rubber), rubber boots, face mask, safety goggles, safety glasses.
-

TABLE 8.4 (continued)
LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

TASK:	<u>True Waste Handler</u> - Solvents/Inks
DUTY:	Prepare solvents/inks for segregation of type waste, storage, drums for empty bottles/cans and preparation of shipment in accordance to the specific TSDf requirement to be used.
ELEMENT:	<ul style="list-style-type: none">A. <ul style="list-style-type: none">• Obtain correct DOT drums for waste• Mark drums as to type waste (See which TSDf will be utilized)• Store waste in solvent/ink waste area• Keeps incoming/outgoing waste logbook• Prepare manifest documentation• Keeps area inspection logbook• Prepare labelling informationB. <ul style="list-style-type: none">• New Solvents/inks -(Not already analyzed and accepted by a specific TSDf)• Obtain 1 quart sample plus type and percentage of contents, waste characteristics• Send sample to Regulatory Manager for finding TSDfC. <ul style="list-style-type: none">• Arrange for transportation to TSDf
EDUCATION:	Should have at least high school education, 2 to 4 years college education with some chemical back ground would be helpful. Must read/write English.
TRAINING:	<ul style="list-style-type: none">1. <u>OSHA 29 CFR 1910.120</u> (24 hour)2. <u>OSHA 29 CFR 1910.1200</u><ul style="list-style-type: none">• Employee's rights• Location of MSDS• How to read an MSDS.• Labelling information3. <u>Forklift Operations</u><ul style="list-style-type: none">• Daily inspection for fluid levels, leaks, brake, chain failure.

TABLE 8.4 (continued)
LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

- Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
4. Manifest/Waste handling System
- Areas of manifest needed for completion by generator.
 - Discrepancy requirements/mailling procedures.
 - Recordkeeping (retention)
5. Hazardous/Characteristics of wastes
- Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.
6. Personal Protection Equipment
- Hart hat, rubber gloves, rain gear (rubber), rubber boots, face mask, safety goggles, safety glasses.

FUNCTION: Q.C. Department

TASK: Analyze incoming recyclable material

ELEMENT:

- Analyzes recyclable material per established parameters.
- Keeps logbook on recycle tracking and logs we received and shipped manifests for recyclable material.
- Can reject material with authorization to return to customer.

EDUCATION: At least high school education and 2 to 4 years chemical background. Must read/write English.

TRAINING: 1. OSHA 29 CFR 1910.120 (24 hour)

TABLE 8.4 (continued)
LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

2. OSHA 29 CFR 1910.1200
 - Employee's rights
 - Location of MSDS
 - How to read an MSDS.
 - Labelling information
3. Forklift Operations
 - Daily inspection for fluid levels, leaks, brake, chain failure.
 - Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
4. Manifest/Waste handling System
 - Areas of manifest needed for completion by generator.
 - Discrepancy requirements/mailling procedures.
 - Recordkeeping (retention)
5. Hazardous/Characteristics of wastes
 - Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.
6. Personal Protection Equipment
 - Hart hat, rubber gloves, rain gear (rubber), rubber boots, face mask, safety goggles, safety glasses.

FUNCTION:

Hazardous Waste Coordinator

Canadian Shipments/Domestic Non-routine shipments

DUTY:

Have unknown wastes analyzed
Prepare TSDF documentation

TABLE 8.4 (continued)
LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

ELEMENT:

- If wastes "unknown", sends to independent lab for analysis
- Prepares waste profile for TSDFs for quotation
- Assures correct packaging and shipping information for labels/paperwork
- Arranges manifest documentation and shipping arrangements
- Canadian shipments - Annual report to U.S. and Canadian EPA for acceptance
- Prepares Canadian and U.S. manifest documentation
- Arranges transportation
- Requests written audits from potential TSDFs and requests and keeps files on potential and current waste transporters (Permits and Certificate of Insurance)
- Establishes procedures for other waste handlers and coordinates their activities by making sure their on-the-job training information is up-to-date with the latest regulations

EDUCATION:

Should have at least 2 to 4 years college with some chemical background education. Must be able to read/write English. Must have DOT/EPA knowledge.

TRAINING:

1. OSHA 29 CFR 1910.1200
 - Employee's rights
 - Location of MSDS
 - How to read an MSDS.
 - Labelling information
2. OSHA 29 CFR 1910.120
3. Outside seminars where applicable in EPA/DOT
4. Use of consultants and written regulations
 - Review Federal Register, publications received from consultants,
 - Call EPA Hot-Line, if any questions.

TABLE 8.4 (continued)
LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

5. Hazardous/characteristics of wastes
- Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.

FUNCTION:	QC Manager (Manufacturing)
DUTY:	Wastes analysis
TASK:	Fingerprint analysis
EDUCATION:	Read/speak/write English, degree in chemistry - BS minimum preferred
TRAINING:	<ol style="list-style-type: none">1. <u>OSHA 29 CFR 1910.1200</u><ul style="list-style-type: none">•Employee's rights•Location of MSDS•How to read an MSDS.•Labelling information2. <u>OSHA 29 CFR 1910.120</u>3. <u>Hazardous/characteristics of wastes</u><ul style="list-style-type: none">• Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.

FUNCTION:	Group Leader: Shipping/Receiving Department
DUTY:	Ship/Receive Hazardous Wastes
TASK:	<ul style="list-style-type: none">• Supervise personnel in off-loading waste from carriers and transporting to QC area.• Transporting wastes from berm to ship/receive area and load carriers.
ELEMENT:	<ul style="list-style-type: none">• Sign incoming waste manifests along with discrepancy checklist - see attached, for each received waste - kept on file with manifests.• Group Leader supervises personnel to do above.

TABLE 8.4 (continued)
LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

EDUCATION: Prefer a High School background, read/write/speak English. Forklift operation.

- TRAINING:
1. OSHA 29 CFR 1910.120 (24 hour)
 2. OSHA 29 CFR 1910.1200
 - Employee's rights
 - Location of MSDS
 - How to read an MSDS.
 - Labelling information
 3. Forklift Operations
 - Daily inspection for fluid levels, leaks, brake, chain failure.
 - Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
 4. Hazardous/Characteristics of wastes
 - Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.
 5. Personal Protection Equipment
 - Hart hat, rubber gloves, rain gear (rubber), rubber boots, face mask, safety goggles, safety glasses.

FUNCTION: Micro Chemical Handler (Manufacturing)

DUTY: Transfer/Inspect Hazardous Wastes

- TASK:
- Mark/label waste containers
 - Transfer waste from pails to drums
 - Assist preparing waste shipments/documentation and weekly inspection logs.

ELEMENT: Prepare wastes for shipment and responsible for berm.

TABLE 8.4 (continued)
LIMITED TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

EDUCATION: Read/speak/write English, prefer High School background

- TRAINING:
1. OSHA 29 CFR 1910.120 (24 hours, if applicable)
 2. OSHA 29 CFR 1910.1200
 - Employee's rights
 - Location of MSDS
 - How to read an MSDS.
 - Labelling information
 3. Forklift Operations
 - Daily inspection for fluid levels, leaks, brake, chain failure.
 - Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
 4. Hazardous/Characteristics of wastes
 - Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.
 5. Personal Protection Equipment
 - Hard hat, rubber gloves, rain gear (rubber), rubber boots, face mask, safety goggles, safety glasses.
-

TABLE 8.5

BROAD TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

1. COMPLIANCE ADMINISTRATOR - CHERRIE D. GILLIS

Job Description

- a. Responsible for implementation of the Hazardous Waste Management Program at the facility. Must know the compliance requirements and procedures required by the Connecticut DEP and EPA.
- b. Assures the proper identification of hazardous wastes generated at the facility.
- c. Establishes procedures to monitor the disposition of hazardous wastes from generation to ultimate disposal and monitors these activities as necessary.
- d. Assures that containers are properly handled, packaged and labelled.
- e. Selects approved transport and disposal contractors and sites.
- f. Prepares and signs manifest papers when applicable.
- g. Coordinates reporting activities to regulatory agencies.
- h. Collects and maintains records in accordance with recordkeeping requirements.
- i. Coordinates personnel training activities.
- j. Conducts limited classroom waste training for specific personnel who handle wastes when review of regulations, manifest/waste labelling system, separation and compatibility of chemicals plus 29 CFR 1910.1200.
- k. Must know the appropriate information required to notify regulatory agencies, and the internal procedures for notifying regulatory agencies.
- l. Must know the liabilities for failure to properly notify or respond to an emergency.

TABLE 8.5 (continued)

BROAD TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

Training Requirements

The Compliance Administrator will be training by reviewing regulatory requirements, attending seminars, use of outside consultants and by on-the-job experience. The training requirements for this position include:

- a. Must have read and be familiar with facility compliance requirements, (including state and federal hazardous waste regulations) procedures, and plans before assuming this function.

Review Federal Register; attend seminars; review publications published by consultants, EPA/DEP, private companies, etc.

- b. May participate in the training program given to facility personnel involved in hazardous waste management.

- c. Knowledge of hazardous/characteristics of wastes on-site.

Review waste analysis reports, meet with Research Personnel to discuss process developing wastes.

- d. Must have been trained in a course on Hazardous Waste Management.

2. FACILITY EMERGENCY RESPONSE COORDINATORS - JOHN MIELE

ALTERNATES: BILL SCHWEIKER
BOB ARDZIJAUSKAS
FRANK CRUICE

Job Description

- a. Designated authority
- b. In the event of an emergency, responsible for immediate implementation and coordination of all notification and emergency response procedures as designated in the Contingency Plan.
- c. Must know how to identify and assess an emergency condition, and under what conditions to notify local authorities.
- d. Must know how to activate appropriate alarms, evacuate personnel if necessary, and notify local authorities.

TABLE 8.5 (continued)

BROAD TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

- e. Must know what arrangements have been made with local authorities.
- f. Must know facility personnel to contact to initiate emergency response procedures.
- g. Must know the appropriate emergency response procedures to implement and how to locate and use the emergency response equipment.
- h. Must know the appropriate information required to notify regulatory agencies, and the internal procedures for notifying regulatory agencies.
- i. Must know the liabilities for failure to properly notify or respond to an emergency.
- j. Decision as to call outside authorities for assistance.
- k. Decision as to evacuation.

Training Requirements

- a. Will be trained by reviewing regulatory requirements, (including State and federal hazardous waste regulations) attending seminars, use of outside consultants and on the job experience.
- b. Must have read and be familiar with the information and procedures contained in the Contingency Plan.

Working knowledge of where waste and virgin materials are stored; chemical and physical hazards of these wastes; evacuation procedures; location of emergency equipment.

- c. Must be trained in the notification procedures in the Contingency Plan, including conditions requiring notification, timing of notification, personnel to notify, local authorities to notify, notification information required, and recording notification events.

TABLE 8.5 (continued)

BROAD TRAINING

MACDERMID, INC.
WATERBURY, CONNECTICUT

- d. Must be trained in emergency response procedures identified in the Contingency Plan, including location and use of all emergency response equipment, coordination with local authorities, containment procedures, remedial procedures, and storage and disposal of recovered materials.
- e. Must be trained in personnel utilization in emergency response activities, including types of personnel to be utilized in emergency response situations, the nature and extent of their duties, and prior training required for proper performance of those duties.
- f. Must have OSHA 29 CFR 1910.120 (24 hour) training.
- g. Fork lift training, as applicable.
 - Daily inspection for fluid levels, leaks, brake, chain failure.
 - Know equipment capacity of truck and weight of what is picked-up.
 - Back down a ramp when carrying a load.
 - Aware truck can flip easily.
 - When leaving truck, turn off completely and set hand brake, Lower forks to ground.
- h. Training on-the-job, in-house seminar when available, reviewing regulatory requirements, use of outside consultants.
- i. Knowledge of hazardous/characteristics of wastes on-site.

Definition of corrosive, oxidizer, flammables, incompatibility, storage for compatibility on truck.
- j. Knowledge of personal protection equipment.

Location of equipment, type of equipment, equipment capabilities.

ATTACHMENT E

INSPECTION PLAN

7.0 HAZARDOUS WASTE INSPECTION PLAN

7.1 Introduction

Under Section 264.15 of the code of Federal Hazardous Waste Regulations (CFR 40) and State of Connecticut Statutes, the owner or operator must fulfill the following general inspection requirements:

- inspect his facility for malfunctions and deterioration, operator errors, and discharges which may cause release of hazardous waste or pose a threat to human health.
- conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.
- develop and follow a written inspection schedule which must be kept at the facility. This inspection schedule must identify the types of problems which must be looked for.
- inspect monitoring equipment, storage tanks, containers, treatment units, loading, unloading areas, safety and emergency equipment, security devices and operating and structural equipment.
- remedy any deterioration or malfunction that the inspection reveals and take remedial action where an incident is revealed.
- record all inspections, including date and time of inspection, name of inspector, notation of observations made and the date and nature of any repairs made and keep these records for a three year period.

7.2 Specific Procedures

Specific procedures for areas of inspection and frequency are included on Table 7.1.

Remedial actions will be noted on the Inspection Log Sheets and maintained in the Operating Record for a minimum of three years. In case of a spill, fire or explosion, the following procedures are to be followed.

TABLE 7.1

INSPECTION SCHEDULE

<u>Area/ Equipment</u>	<u>Specific Item</u>	<u>Types of Problems</u>	<u>Frequency of Inspection</u>
Safety & Emergency Equipment	Absorbent Material	Out of Stock	Monthly/as Needed
	Emergency Shower/Eyewash	Water pressure, leaking, drainage	Weekly
	Goggles and Protective Glasses	Broken or dirty equipment	Monthly
	Rubber Gloves	Out of Stock	As Used
	First Aid Equipment and Supplies	Out of Stock or inoperative	As Used
	Telephone/Paging System/Beepers	Power Loss, Voice Test or Signal	Daily
	Fire Extinguishers	Needs Recharging	Monthly/After Each Use
	Respirators/ Cartridges	Out of Stock	Weekly
	Chemical Suits	Out of Stock/Wear and Tear	As Used
	Shovels	Condition/Out of Stock	As Used
	Scott Air Pack	Air delivery system, Air quantity in reserve	Monthly
	Walkie-Talkies	Power, Voice Test	Weekly/Prior to Use
	Fire Alarm System	Power failure, Audible Alarm	Monthly
	Sprinkler System	Loss of water pressure, signal to security service	Monthly
	High Level Alarms	Signal to ADT, Audible Alarm	Monthly
	Water and air pumps	Power, clogging	Weekly
Container Storage and Handling Areas	Container Placement and Stacking	Aisle space, height of stacks	Weekly
	Sealing of Container	Open lids, torn lining	Weekly
	Labelling of Container	Improper identification, date missing	Weekly
	Containers	Corrosion, leakage, structural defects	Weekly
	Pallets	Damaged (e.g. broken wood, warping)	Weekly
	Base & Foundation of Container Storage Area	Cracks, Spalling, uneven settlement, erosion, wet spots	Weekly
	Curbing for Container Storage Area	Cracks, deterioration	Weekly
	Storage Area Racks in good condition	Leaks, spills Sagging, swaying	Daily Weekly

TABLE 7.1 (continued)

INSPECTION SCHEDULE

<u>Area/ Equipment</u>	<u>Specific Item</u>	<u>Types of Problems</u>	<u>Frequency of Inspection</u>
	Storage Pallets*	3rd level and above strapped	Weekly
	Racks*	Drum inspection for leads, etc., row B01, B02, B03, B04, B05, level 1-5	Weekly
	High Level Alarm*	Working Order	Weekly
* Apply to the main container storage area only.			
Waste Storage Tank Area/Recycling Area	Level	Tank filled to capacity, unexpected volume loss	Daily Record must be kept of level and gains and losses.
	Area Around Tank	Spotting indicating leaks	Daily
	Fittings	Leaks, corrosion, deterioration	Weekly
	Base & Foundation	Cracks, spalling, uneven settlement, erosion, wet spots sealant, deterioration	Daily
	Pipes	Leaks, corrosion, deterioration	Weekly
	Valves	Loss of metal thickness, leaks, corrosion	Weekly
	Warning Signs	Damaged, missing	Weekly
	Level Gages	Working Order	Weekly
	Drainage System	Clean/free, evidence of spilled material	Daily
	Concrete Block Wall	Cracks, sealant deterioration	Daily
Metal Hydroxide/Sulfide Sludge Storage Area	Tank Shell	Cracks, corrosion, discoloration, bulges, buckles	Daily
	High Level Alarm	Working Order	Weekly
	Base & foundation (including sealer)	Cracks, spalling, uneven settlement, erosion, wet spots	Weekly
	Sludge press air pressure gauge pipes/valves/fittings	Loss of metal thickness, leaks, corrosion, deterioration	Weekly
	26 yd ³ roll-off container	Liner in place, sludge free of liquid	Weekly
	Warning light shut off for overfill - sludge holding tank	Light in good working condition	Weekly

TABLE 7.1 (continued)

INSPECTION SCHEDULE

<u>Area/ Equipment</u>	<u>Specific Item</u>	<u>Types of Problems</u>	<u>Frequency of Inspection</u>
Bulk Loading/Unloading Area	Mobile Drainage System catch access H ₂ O from press	Clear/free	Weekly
	Filter press: material should be caked	Condition	Weekly
	Sludge holding tanks	Leaks, valves	Weekly
	Warning Signs	Damaged, missing	Weekly
	Valves/fittings/pipes	loss of metal thickness; leaks, corrosion, deterioration	Weekly
	Dike	Cracks, deterioration	Weekly
	Level gauges	Working order	Weekly
	Base & Foundation	Cracks, spalling, uneven settlement, erosion	Weekly
	Drainage System	Sump drains - clear/free evidence of spilled material	Weekly
	Cinder block wall	Cracks, sealant deterioration	Weekly
Security Devices	Loading/Unloading Area	Spills	Daily
	Facility Fence	Corrosion, damage to Chain-link fence	Weekly
	Gate	Corrosion, damage to Chain-link fence	Weekly
	Warning Signs	Damaged, missing	Weekly

First, the Emergency Coordinator, or his alternate, would be contacted immediately. The Emergency Coordinator will then carry out the Contingency Plan agreed to by local organizations (police and fire departments, hospitals, etc.).

A spill, fire or explosion would be controlled or contained from spreading (if possible) without any further risk or danger to plant personnel.

The names and the phone numbers of the Emergency Coordinator and his designated alternate are listed in the Contingency Plan, for MacDermid, Inc. in Section 10.0.

7.3 Notification

The Connecticut Environmental Protection Agency will be notified by phone, followed by a written report if any of the following occur:

- 1) Release of hazardous wastes.
- 2) Fires involving hazardous wastes.
- 3) Explosions involving hazardous wastes.
- 4) Ground water contamination resulting from hazardous waste incidents.

7.4 Inspection Schedule

This section will delineate the equipment and structures at the facility which require routine inspections. A summary of the areas of inspection and inspection frequency are provided on Table 7.1.

7.4.1 Containment Areas

The storage containment areas consisting of concrete floor surfaces and berms will be visually inspected weekly for signs of structural defects (i.e. cracks, damage, erosion, etc.).

7.4.2 Site Security

At the close of each operating day, all entry gates to the facility will be checked to ensure they are locked. All doors to the facility will be checked to ensure that they are locked.

7.4.3 Areas Subject to Spills

All areas which may be subject to spills will be inspected at least once each operating day for signs of spillage or leakage. These areas include the loading/unloading areas. The results of each such inspection will be entered into the Operating Record.

7.4.4 Containers [40 CFR Sections 264.15(a) and 264.174]

At least weekly, the drums in the container storage and container handling areas will be inspected for leaks, signs of corrosion, deterioration, pitting, bulging, and to ensure that each container is securely closed. Adequate aisle space will be provided in the container storage area to allow for a thorough inspection of each drum in storage. During these inspections, each drum will be visually inspected. In addition, the storage and handling containment area consisting of all concrete floor surfaces and containment berms will be visually inspected for evidence of spills, leaks, and structural defects (cracks, erosion,

pitting, etc.). The results of each inspection and the nature of any repairs will be entered into the Operating Record.

7.4.5 Storage Tanks

This section will delineate the tanks and related structures which require routine inspections at the facility.

7.4.5.1 Tank Level [40CFR §264.194(a1-3)]

At least once each operating day, the level in each tank will be either measured, or verified from previous readings if no deliveries or discharges have been made to or from the particular tank. The tank levels will be recorded in the Operating Record.

This log of tank levels will be utilized prior to the acceptance or transfer of additional material to verify adequate capacity in the tank for said acceptance. This will preclude the possibility of overfilling the tanks.

7.4.5.2 Construction Materials [40 CFR §264.194(a4)]

At least once each week, the exterior of each tank will be visually inspected to detect corrosion, erosion, cracks and leakage from seams and fixtures. The results of each inspection will be entered into the Operating Record.

7.4.6 Loading/Unloading Areas

The container and bulk loading and unloading areas at least once each operating day will be inspected for signs of

spillage. The dikes, base, foundation, and warning signs of the loading and unloading areas will be visually inspected for evidence of cracks, spalling, deterioration and damage on a weekly basis. The results of each inspection and the nature of any repairs will be entered into the Operating Record.

7.4.7 Emergency Equipment Inspection [40 CFR Section 264.15(b)]

This section will address the frequency and type of inspections to be conducted with regard to communication and alarm systems, fire extinguishing equipment, safety equipment and spill control equipment.

7.4.7.1 Fire Extinguishing Equipment

- (1) At least once each month, all portable fire extinguishers on-site will be visually inspected in accordance with OSHA Standard 29 CFR 1910.157(E)(2), and NFPA Standard 10 entitled, "Standard for Portable Fire Extinguishers", Section 4-3 by MacDermid, Inc. These monthly inspections will determine: if all extinguishers are in their designated places; if each such extinguisher is clearly visible; if the operating instructions on each extinguisher are legible; if any seals or tamper indicators are broken or missing; if any signs of physical damage, corrosion, leakage, or clogged

nozzles are obvious; and if pressure gauge readings are in operating ranges.

- (2) At least annually, each portable fire extinguisher will be subjected to an annual maintenance check in accordance with OSHA Standard 29 CFR 1910.157(e)(3), and NFPA Standard 10, Section 4-4. Each extinguisher will be hydrostatically tested in accordance with the schedule set forth in 29 CFR 1910.157(f), Table L-1 and/or NFPA Standard 10, Table 5-3. The annual inspection, at present, is performed by Waterbury Fire Extinguisher Company in Waterbury, Connecticut. Copies of these annual inspections are maintained as part of the operating record. A copy of their qualifications is provided in Appendix L.

7.4.7.2 Protective Equipment

At least once each month, all protective equipment maintained on-site (protective glasses, gloves, respirators, etc.) will be inventoried and checked for full operational status. Communications and alarm systems will be inspected and tested for proper functioning. (Refer to the Operating Record.)

7.4.7.3 Spill Clean-Up Equipment

At least once each month, all spill clean-up equipment (shovels, absorbent, etc.) will be inventoried and checked for operational status.

The results of each such inspection in this section will be entered into the Operating Record.

7.4.7.4 Communication System

The communication systems employed at MacDermid, Inc. include telephones, telephone paging system, beepers and walkie-talkies. The telephones, telephone paging system and beepers are used daily by MacDermid. Therefore, any operational problems associated with these communication devices will be detected that same day. The walkie-talkies are used at MacDermid for non-routine tasks such as inspecting outside raw material storage tanks. Therefore, the walkie-talkies as specified in Table 7.1 will be inspected weekly.

7.4.7.5 Fire/Sprinkler Systems

The pull-boxes located throughout the Huntingdon Avenue facility will activate an internal audible fire alarm only. This alarm system will be tested monthly. The sprinkler system when activated will contact the security company ADT, who will notify the fire department and MacDermid's Alarm Security

Investigator. The sprinkler system is tested monthly by ADT for water pressure and signal to the off-site ADT office.

7.5 Preventative Maintenance [40 CFR Section 264.15(a)]

As stated in the Introduction to this Plan, its purpose is to establish an inspection routine to detect malfunctions, deterioration, leaks and discharges. This Plan shall not be used as a substitute for a routine preventative maintenance plan for facility equipment required to maintain the facility in top operational condition.

7.6 Containment Area Accumulation

If subsequent to inspections, or if at any other time, it is observed that liquids have accumulated in any of the secondary containment areas, the situation will be handled as follows:

- a) If the exact source of the leaked or spilled material can readily be determined, the material will be identified accordingly, and transferred to an appropriate container.
- b) If the source or identity of the spill cannot be determined, a sample will be collected and analyzed to see if it exhibits any of the four characteristics of a hazardous waste (ignitability, corrosivity, reactivity or EP toxicity), or to see if it contains any of the hazardous constituents (40 CFR 261, Appendix VII) of any listed wastes stored in the particular containment area. Test methods will be as described in Sections 4 and 5 of Attachment A - the facility waste analysis plan.

In either case (a) or (b) above, any accumulated liquids in secondary containment areas will be removed as soon as possible to preclude any possibility of overflow.

7.7 Surface Impoundments Inspection [40 CFR Section 264.226]

Not applicable to Mac Dermid, Inc.

7.8 Waste Pile Inspection [40 CFR Sections 264.253 and 264.254]

Not applicable to MacDermid, Inc.

7.9 Landfill Inspection [40 CFR Section 264.303]

Not applicable to MacDermid, Inc.

7.10 Incinerator Inspection [40 CFR Section 264.347]

Not applicable to MacDermid, Inc.

7.11 Recordkeeping [40 CFR Sections 264.15(b) and (d)]

Hazardous waste storage facility inspection records of MacDermid, Inc. will be kept on-site for three years from the date of inspection. These records will include the date and time of the inspection, the name of the inspector, the type of problem found, and the date and type of any repair performed.

All inspection records must be periodically updated and entered into a Facility Operating Record.

Sample inspection record logs are provided in Appendix A of this attachment.

There may be
a couple more
subtle changes in
the inspection
sheets

APPENDIX A
INSPECTION LOGS

HUNTINGDON AVENUE SECURITY FENCE AND GATES
MONTHLY INSPECTION LOG BY -MAINTENANCE MANAGER

Entire perimeter fence, including all gates and locks, to be inspected monthly for integrity, corrosion, hinge and lock operation and unnecessary openings. Records to be retained for 3 years.

DATE/TIME	PROBLEMS OBSERVED (SPECIFY LOCATION)	REMEDIAL ACTION TO BE TAKEN. BY WHOM AND WHEN?	DATE COMPLETED	TIME	INITIALS
Jan:					
Feb:					
Mar:					
Apr:					
May:					
Jun:					
Jul:					
Aug:					
Sep:					
Oct:					
Nov:					
Dec:					

Figure 7.1 cont.

5/89

RCRA/CR WASTES ONLY

OK = / Problem = X*

[illegible]

*State problem and how rectified and date.

- Tank Storage -

HUNTINGDON AVENUE
RECLAIM LOG BOOK (BULK)
ETCH

*WHEN MACDERMID TRANSHIPS,
WE ACT AS NEW GENERATOR

[illegible]

*If gage not working properly, write in here date, problem and how fixed.

Satellite Areas

OK = Problem = X*

[illegible]

*State problem and how rectified and date.

[illegible]

COMBUSTIBLE BERM - RECLAIM - GEAR STREET

CONTAINER STORAGE AREA INSPECTION LOG SHEET - WEEKLY

INSPECTOR'S INITIALS*

$$N = N_0$$

ITEM/TYPER OF PROBLEMS

[illegible]

Give date and how problem rectified:

MACDERMID

Department: _____

ITEM/TYPES OF PROBLEMS

[illegible]

***Give date and how problem rectified:

ACCEPTABLE: Y = YES
N = NO

MACDERMID: BULK ETCH TANK STORAGE AREA/RECYCLING AREA
AND ANCILLARY EQUIPMENT
WEEKLY INSPECTION LOG SHEET

MACDERMID

ACCEPTABLE: Y = YES
N = NO

Department: _____

INSPECTOR'S INITIAL *

ITEM/TYPES OF PROBLEMS	INSPECTOR'S INITIAL *							
	*	*	*	*	DATE:	TIME:	DATE:	TIME:
Warning Signs - Damaged, missing	DATE:	DATE:	DATE:	DATE:	DATE:	TIME:	DATE:	TIME:
Pipes/Fittings - leaks, corrosion, deterioration	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:
Valves - loss of metal thickness, leaks, corrosion								
Etch Tank Level Gages - Working order								
Level - Tank filled to capacity unexpected volume loss								
Sludge press, air, pressure gauge, pipes/valves/fittings - loss of metal thickness, leaks, corrosion, deterioration								
Warning light shut off for overflow - sludge holding tank - light in good working condition								

High Level Alarm (Working Order)

***Give date and how problem rectified:

MACDERMID: METAL HYDROXIDE SLUDGE WASTE AREA - DRY MATERIAL
WEEKLY INSPECTION LOG SHEET

MACDERMID

ACCEPTABLE: Y = YES
N = NO

Department: _____

INSPECTOR'S INITIAL *

ITEM/TYPES OF PROBLEMS	INSPECTOR'S INITIAL *							
	*	*	*	*	*	*	*	*
	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:
Base of Foundation (including sealer) - cracks, spalling, uneven settlement, erosion wet spots, sealant: deterioration								
Sludge Press Air Pressure Gauge								
Pipes/Valves/Fittings - Loss of metal thickness, leaks, corrosion, or deterioration								
26 yd ³ Roll-Off Container - Liner in place, sludge free of liquid								
Warning Light Shut-off For Overfill-Sludge Holding Tanks - Light good working condition								
Mobile Drainage System Catch Excess H ₂ O From Press - Clear/Free								
Filter Press: Material should be Cake - Condition								
Sludge Holding Tanks - Leaks, valves								

***Give date and how problem rectified:

MACDERMID: WAREHOUSE - RECLAIM
CONTAINER STORAGE AREA INSPECTION LOG SHEET- WEEKLY

ACCEPTABLE: Y = YES
N = NO

MACDERMID

Department: _____

INSPECTOR'S INITIAL *

Item/Types of Problems								
	*	*	*	*	*	*	*	*
	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:
1. Container Placement and Stacking - aisle space, height of stacks								
2. Racks in good condition - sagging, sway								
3. Sealing of Containers - Open lids, torn lining								
4. Labeling of Containers - Improper identification, date missing								
5. Containers - Corrosion, leakage, structural defects								
6. Storage Pallets - 3rd level and above strapped								
7. Storage Area - leaks, spills sump flow, unobstructed								
8. Pallets - Damaged (e.g. broken wood, warping)								
9. Base of container and storage area and foundation - Cracks, spalling, uneven settlement, wet spots								
10. Racks: Drum Inspection for Leads, etc. Row B01, B02, B03, B04, B05, level 1-5								
11. Curbing for Container Storage Area - Cracks, deterioration								
12. High Level Alarm In Sump (working order)								

Give date and how problem was rectified:

* Problem +how solved:

MACDERMID: BULK LOADING/UNLOADING AREA
WEEKLY INSPECTION LOG SHEET

MACDERMID: _____

ACCEPTABLE: Y = Yes
N = No

Department: _____

INSPECTOR'S INITIALS*

ITEM/TYPES OF PROBLEMS	INSPECTOR'S INITIALS*				ACCEPTABLE			
	*	*	*	*	*	*	*	*
	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:
	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:	TIME:
Base of Foundation - Cracks, spalling, uneven settlement, erosion, wet spots, sealant: deterioration								
Pipes/Valves/Fittings - Loss of metal thickness, leaks, corrosion or deterioration								
Level Gages - Working order								
Loading/Unloading Area - Spills (D)								
Drainage System - Sump Drains: clear/free evidence of spilled material								
Dike - cracks, deterioration								
Cinder Block Wall - Cracks, sealant deterioration								

Give date and how problem rectified: _____

WEEKLY INSPECTION LOG SHEETS
EMERGENCY EQUIPMENT/SECURITY DEVICES

Company: _____ DATE: From: _____
 Inspector's Name: _____ To: _____
 Inspector's Title: _____

SAFETY AND EMERGENCY EQUIPMENT

D - Daily; M - Monthly

ITEM	TYPES OF PROBLEMS	DATE/TIME OF INSPECTION	ACCEPT.	UNACCEPT.	OBSERVATIONS	DATE AND NATURE OF REPAIRS AND REMEDIAL ACTION
Fire Alarm System	Power failure, audible alarm					
Absorbent Material	Out of Stock					
Emergency Shower and Eye Wash	Water pressure, leaking, drainage					
Water and Air Pumps	Power, clogging					
Goggles and Protective Glasses	Broken or dirty equipment					
Fire Extinguishers (M)	Needs recharging					
Rubber Gloves	Out of stock					
Telephone System/Beepers/Paging (D)	Power failure					
Walkie-Talkies	Power, voice test					
First aid equipment and supplies (M)	Items out of stock or Inoperative					
Shovels	Condition/Out of Stock					
Chemical Suits	Out of Stock/ wear and tear					

WEEKLY INSPECTION LOG SHEETS
EMERGENCY EQUIPMENT/SECURITY DEVICES

Company: _____ DATE: From: _____
 Inspector's Name: _____ To: _____
 Inspector's Title: _____

SAFETY AND EMERGENCY EQUIPMENT

D - Daily; M - Monthly

ITEM	TYPES OF PROBLEMS	DATE/TIME OF INSPECTION	ACCEPT.	UNACCEPT.	OBSERVATIONS	DATE AND NATURE OF REPAIRS AND REMEDIAL ACTION
Scott Air Pack	Air delivery system, air quantity in reserve					
Respirators/Cartridges	Out of Stock					
Sprinkler System (M)	Loss of water pressure, signal to security service					
Facility Fence	Corrosion, damage to chain-link fence					
Gate	Corrosion, damage to chain-link fence					
Warning Signs	Damage, missing					
High Level Alarms (M)	Signal to ADT, audible alarm					